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JOURNAL OF AMERICAN INSURANCE

VOL. 22 ★ No. 8 AUGUST, 1945

Featuring

Big Fires of
Nineteen Forty-four

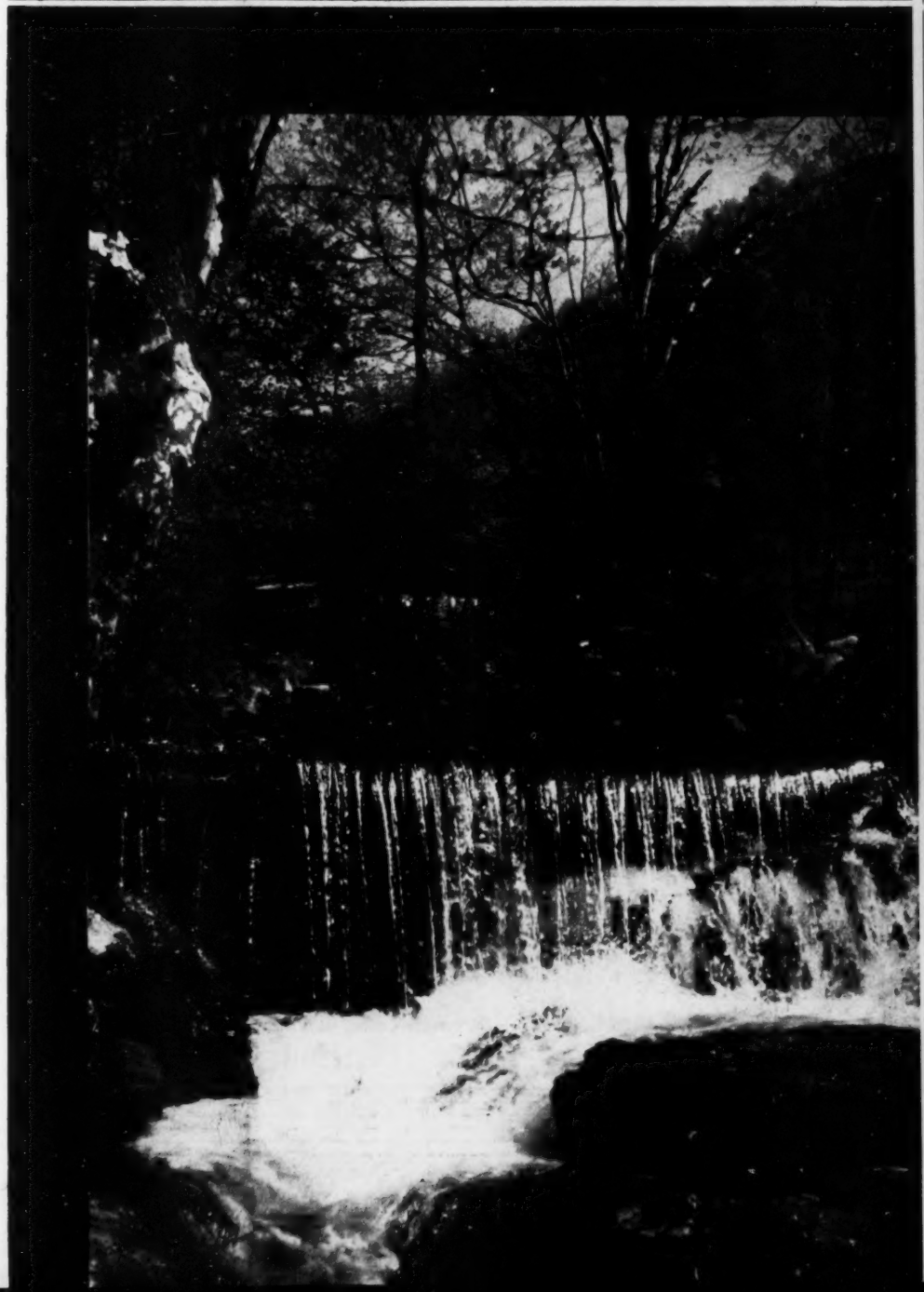
The Veteran Returns
To Industry

Preventing
Airplane Hangar Fires

Personal Airplanes
Toys or Transportation

1944
Aviation Underwriting
Experience

Insurance News Digest



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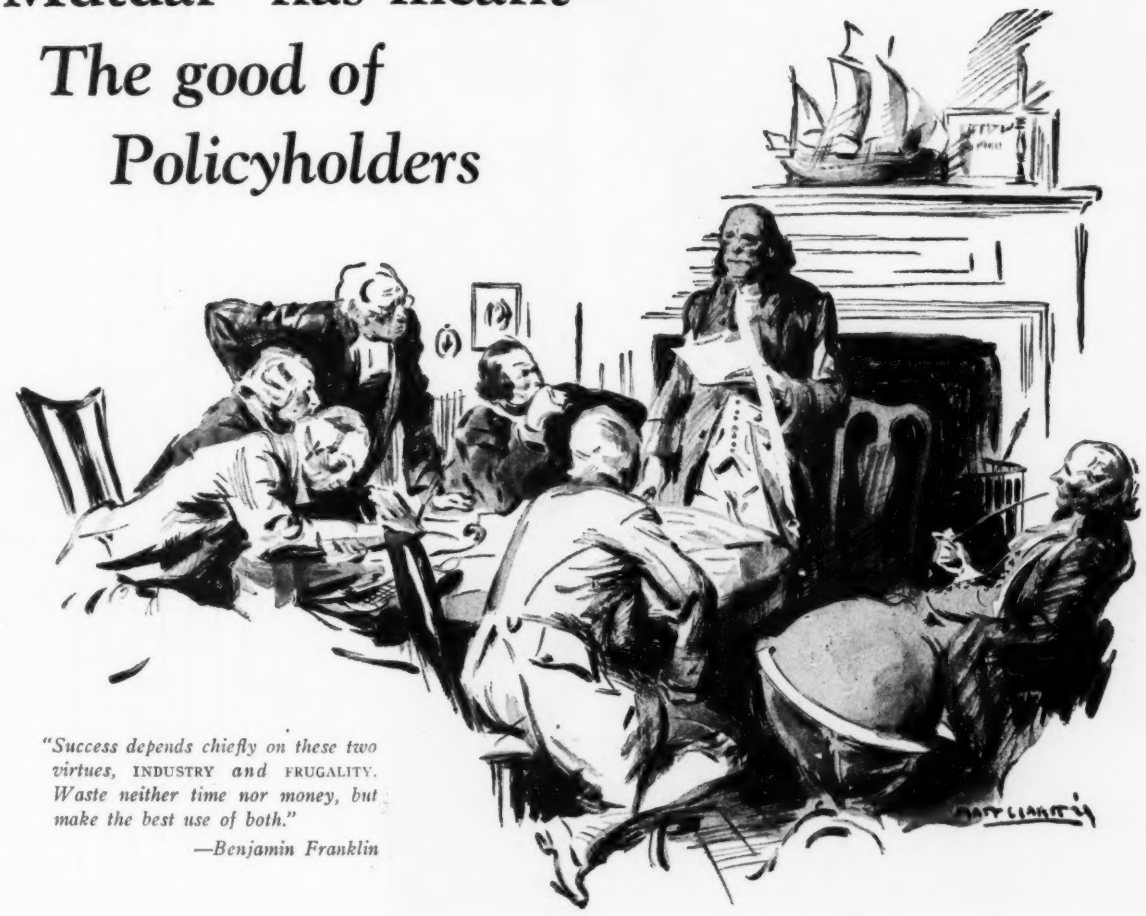

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Director of Trade and Commerce

STATE OF ALABAMA

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ATOMIC DISTURBANCES

THE public prints of the immediate past have teemed with stories of the atomic bomb, its development, purpose, use and the possible effect of its secret upon the future of the human race. Top ranking scientists, scholars, students and ordinary citizens freely offer opinions as to whether it will prove to be for the weal or woe of humanity. While few of us have the mentality capable of understanding the phenomena contributing to the accomplishment, most of us appreciate that science has given us something of tremendous potential danger and the consensus is that it behooves those intelligent and peace loving people of the earth who possess the secret to see to it that the discovery is turned to the peace, profit and comfort of the whole world. The explosion at Hiroshima is a warning not to be ignored or taken lightly.

Although the discovery of means to harness atomic force and the resulting explosion over Japan's eleventh city has no direct bearing on the business of insurance, the dropping of that bomb does remind us somehow of the bombshells which have burst, from time to time, during the history of the business and the effect of those explosions upon its development as one of the great economic forces of the world. Not all of those explosions have come without warning. In fact, few of them have, and the larger ones have been much of the nature of delayed action bombs with repeated warnings and long periods in which leaders in the business rationalized themselves into believing that they were viewing a dud—that no explosion would ever really take place. One of the more important examples of this type of thinking is recorded in the history of life insurance and what it experienced in the Armstrong investigation of comparatively a few years ago. As a result of that investigation revolutionary changes were effected in life insurance in the interest of the policyholder.

There have been other and less important eruptions in the business during the last 25 years. None of these has been vital to or threatened the existence of the business as a part of private enterprise except, of course, the tendency toward state operation in the consideration of workmen's compensation legislation. To some extent, especially in the casualty field, they have brought some benefit to the policyholder.

It remained for the stock fire insurance companies to bring down upon the business in the S.E.U.A. case the greatest upset it has ever experienced, with all of the admittedly far reaching effects of that decision still a matter of speculation. The recital of facts leading up to the prosecution of that case as related by Mr. Frank H. Elmore, Jr., a former Special Assistant Attorney General of the U. S., in our July issue is interesting reading. The National Underwriter, long a recognized stock insurance medium, complains editorially that Mr. Elmore failed to offer a solution for any one of the multitudinous problems emanating from the decision in that case. We hardly think Mr. Elmore was called upon to do that; we rather feel that the solutions are properly up to the business itself. Certainly that business may not, now that the smoke of the explosion is clearing, assume a "do nothing" attitude, or wait for suggestions from without, or take the position that practices which brought about the cataclysm may be continued under some other name as was attempted in Arizona, for example, by Senate Bill 65. Almost everyone agrees upon that, although a few may do so reluctantly and continue to nurse the hope that somehow or someway we may return to the status quo ante.

Insurance is fortunate in that unlike those to whom the atomic bomb brought defeat, it has an opportunity to write its own specifications for its future conduct, being restricted only to the general pattern laid down by

(Continued on page 9)

Big Fires of Nineteen Forty-four

Paced by Global War Activities the Fire Losses of 1944 Hit a New High for the Decade

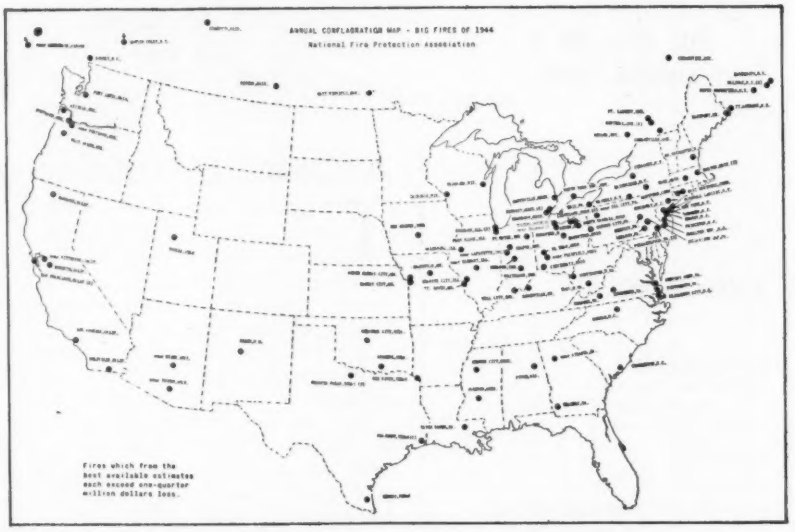
THE year 1944, which saw the United States go all out in its war production effort, also was the year in which the nation's fire losses skyrocketed to the highest point since 1931. As a result, the number of large loss fires was also up appreciably in 1944. According to the authoritative annual listing made public by the National Fire Protection Association several months ago, from which this information is taken by permission, there were during 1944 in the United States, Canada, and Alaska a total of not less than 122 fires, each of which resulted in a loss of $200,000 or more, all except sixteen of them in the United States. This is an increase of seventeen such fires or 16% over the 1943 total, and is an increase of 220% during the past five years. While a substantial number involved industrial plants engaged in war production, no less than eighteen destroyed property at Army and Navy establishments. It is often difficult and sometimes virtually impossible to obtain information about fires occurring on Army and Navy property due to the strict censorship that prevails. Loss information is apt to be unreliable in these cases because, since the property is not insured, it is not subject to a valuation by insurance appraisers and adjusters.

The most disastrous fire of 1944, from a monetary viewpoint, was that which destroyed a Lend-Lease warehouse at Rockaway, New Jersey, on March 6th. The reported loss on this conflagration was $11,000,000.

The most outstanding fire of the year, however, could not be measured in terms of dollars and cents. It was a fire in which the property damage was hardly serious enough to put the blaze into the list of major fires, but in which 165 persons lost their lives. The tragic fire which swept the Ringling Bros. and Barnum & Bailey Combined Shows during a matinee at the city-owned circus grounds on the outskirts of Hartford, Connecticut, on July 6, was without a doubt the worst catastrophe of the year.

In addition to the $11,000,000 blaze at Rockaway, New Jersey, on March 6, there were sixteen other large loss fires in 1944 which resulted in damage of more than $1,000,000.

The other fourteen, ranked in order of estimated damage, were: a salt manufacturing plant at Marysville, Michigan; a base repair shop and part of a warehouse at the Atlanta Ordnance Depot; an Ordnance depot fire at Detroit, Michigan; the Iron Fireman Manufacturing Company at Portland, Oregon; a flour mill at North Kansas City, Missouri; a storage warehouse at Oklahoma City, Oklahoma; military property at Red River, Texas; a glass works and rubber plant at St. Laurent, Quebec; the Douglas Aircraft Corporation plant at Park Ridge, Illinois; a cotton compress and peanut oil mill at Ardmore, Oklahoma; a steamship pier at Hoboken, New Jersey; military property at Granite City, Illinois; Inspiration Consolidated Copper Company near Miami, Arizona; East Ohio Gas Company, Cleveland, Ohio; Federal Shipbuilding and Dry Dock Company, Kearney, New Jersey; grain elevator, Chicago, Illinois; a railroad pier at Newport News, Virginia; and a warehouse and manufacturing building at Kansas City, Missouri.


ANNUAL CONFLAGRATION MAP - BIG FIRES OF 1944
National Fire Protection Association
Fires which from the best available estimates each exceed one-quarter million dollars loss.

N.F.P.A. Annual Conflagration Map—1944

Military and naval properties were involved in a larger number of fires causing damage in excess of $250,000 than were any other type of structures, a total of eighteen of them having burned. There were eleven major fires in warehouses. Metal-working plants were responsible for eleven, while miscellaneous manufacturing plants accounted for eleven of the large losses. Ten fires involved wood workers (including lumber manufacturing), while mercantile properties and piers and wharves were responsible for six each. Flour and feed mills, oil refineries, and shipbuilding yards each accounted for four large fires. Department stores, group fires and office buildings were responsible for three each. Airplane hangars (civilian), canneries, cottonseed and peanut oil mills, and grain elevators each accounted for two of the large losses.

The other eighteen were: a bowling alley; a circus; a cotton compress; a coal tipple; a dehydrating plant; a distillery; a gas works; a hotel; an ore refinery; a paper mill; a race track grandstand and clubhouse; a residence; a rubber worker; a salt plant; a ship (ferry); a university building; a wool processing plant; and a yacht yard.

The National Fire Protection Association analysis of the reasons for the large losses in the listed fires reveals that in each instance a combination of several factors was responsible. These are given in the following table:

	No. Times Contributing
Structural Factors	
Inferior construction, excessive areas, etc.	78
Lack of sufficient exposure protection	21
Unprotected vertical openings	17
Occupancy Factors	
Highly flammable contents, excessive amounts of burnable stock	54

	No. Times Contributing
Flammable liquids and gases	20
Unsafe heating equipment	6
Contents of unusually high value	6
Fire Protection	
Lack of adequate private protection	77
Lack of fire doors or cut-offs between sections	32
Fire doors blocked open or otherwise inoperative	2
Lack of adequate public protection	7
Sprinkler system shut off	6
Fire Fighting	
Fire difficult of access	10
Poor fire fighting	2
Fire department inadequately manned or equipped	6
Inexperience in fighting fires of such magnitude	8
Fire department delayed	1
Delays in Giving Alarm	
Headway of fire when discovered	17
Efforts made to extinguish without giving alarm	10
Lack of public fire alarm system	2
Water Supplies	
Inadequate water supply	21
Shortage of hydrants	3
Lack of approaches to static water supply, such as river, pond etc.	1
Weather Conditions	
Strong wind	14
Extreme cold	4
Explosions	8

• • •

Those fires of 1944 involving a loss in excess of $500,000 as reported by National Fire Protection Association, follows:

January 4, Ware, Mass.
Ware Industries, Inc.
Loss: $976,500.

This was a very large industrial property, three-story brick plank on timber construction normally protected by automatic sprinklers. The plant was occupied by a knitting mill, dress shop, machine shop, woolen company and other tenants. The fire started on the second floor of a tenant bag shop when a workman, contrary to no-smoking rules, struck a match which ignited refuse from feed bags which had been emptied on the floor. The sprinkler system in the section where the fire originated had been frozen about ten days previously. When repairs had been made, the valve had supposedly been left open, but after the fire the valve was found closed. The valve indicator read "Open" and no water flow test had been made. Automatic sprinklers in adjoining sections operated, but the water supply was inadequate to serve both the sprinklers and the mill yard hydrants used by the fire department to supply hose streams. Effective fire fighting was handicapped by the location of a large portion of the plant in a bend of the Ware River and thus accessible only on the exposed side facing the building in which the fire started. After five hours' pumping one of the local pumpers, which was 21 years old, broke down. About this time sparks carried by the very high wind ignited a large mansion some 3,000 feet distant across the river, resulting in a $20,000 loss. Nine outside fire departments were called and the fire was finally extinguished the next day. Several other exposed buildings were saved. The total loss from this fire has been placed at approximately $967,500, of which approximately $310,000 was fire damage and rent loss to the Ware Industries, Inc. The balance was loss suffered by some eight tenants and the loss to the mansion that was ignited by flying brands. Also included in the loss figure was some $125,000 use and occupancy loss.

January 10, Marysville, Mich.
Morton Salt Co.
Loss: $2,000,000.

This plant, said to be the largest salt manufacturing plant in the country, was 45 years old. The buildings were largely frame and corrugated iron, closely grouped and without automatic sprinklers. It was about three quarters destroyed; a small area of fire-resistive construction prevented spread of the fire in one direction. Fire originated in a dry kiln used for drying barrel staves, due to wood refuse in contact with steam pipes. The fire department was called at the first indication of smoke, but was shorthanded owing to war conditions, and with a 45 m.p.h. wind, and some delay in securing an adequate water supply for pumpers, was unable to prevent the spread of the fire despite aid summoned from several near-by communities.

January 12, Toledo, Ohio.
Business Block.
Loss: $503,200.

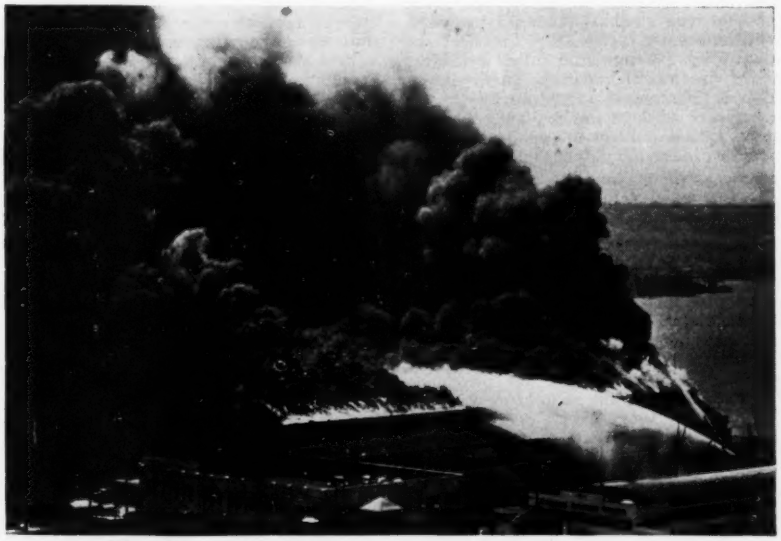
This property was a one-story tenant mercantile block of brick-joist construction. Areas occupied by individual tenants were subdivided by combustible partitions and the fire spread through open roof space. Ceilings were likewise reportedly of combustible construction. This building had been erected in 1940 and was in compliance with the obsolete building code requirements then in effect. There were no fire walls, or automatic sprinklers. Fire occurred at 4:27 A.M. while employees of the Colony Block alleys were refinishing bowling pins. It is believed that a spark from emery cloth held against the pins on the lathe ignited fumes from alcohol and naphtha solutions used to clean pins. One of the workmen ran to a near-by fire station to give the alarm. When the firemen arrived, flames had spread through the combustible partitions into the open roof space above, seriously involving six of the tenant mercantiles. The fire department experienced considerable difficulty in combating the fire, due to extensive use of "some sort of corrugated paper insulation in stores to deaden sound of bowling alleys." Firemen reported that when they pulled this material away the intense flames burst forth. Sixteen fire companies were employed in fighting the fire, which cost the life of one fireman when he was trapped by a heavy concrete slab following an explosion. Twelve other firemen were injured, several severely.

January 20, near Atlanta, Ga.
Military Property.
Loss: over $2,000,000.

Fire originating during the early morning hours destroyed the base repair shop and part of a warehouse at the Atlanta Ordnance Depot. It is understood that the repair shop building was 248,000 sq. ft. in area, and had neither fire walls nor sprinkler protection. The building was one story, with a maximum height of 50 ft. and had brick walls and a wood timber roof. The fire spread across a 100 ft. space to a warehouse of smaller size. It is said that reflection from the fire was visible in downtown Atlanta, ten miles away. Firemen from Atlanta, Hapeville and the Army Depot fought the fire. The loss figure released for publication was $2,000,000 to $2,500,000.

January 24, Detroit, Mich.
Military Property.
Loss: $2,000,000.

Fire at the Fort Wayne Ordnance Depot which started in a boiler room in an unprotected frame warehouse destroyed three such warehouses containing automotive parts which constituted a reserve supply being built up in anticipation of military needs in the war theatres. Fire was discovered by several workmen at 7:00 A. M. when they opened the ware-



Coast Guard Photo

Many plants and storage warehouses filled with essential war goods yielded to flames

house. The Detroit Fire Department responded to five alarms with 22 fire companies and a fire boat and used 35 lines of hose. A Coast Guard boat also assisted in fighting this fire. A brisk wind is said to have contributed to the spread of the fire to the exposed warehouse. The warehouse in which the fire started was 100 ft. by 75 ft. in area and was of one-story and basement construction. The exposed warehouses were of somewhat smaller size. The loss figure released for publication is $2,000,000.

February 2, Portland, Ore.
Iron Fireman Mfg. Co.
Loss: $3,000,000.

This plant was engaged in the manufacture of engines for Liberty ships under contract with the U. S. Maritime Commission. Large areas of frame and brick-joisted construction without fire cut-offs permitted a fire that was comparatively small when discovered to sweep through several major sections of the plant with extreme rapidity. Powerful public fire department forces that were quickly on the scene were powerless against the fire conditions resulting from deficiencies in private protection, but did excellent work in saving other large plant areas that were seriously exposed. Fire started under the wooden basement of an old frame building remodeled for use as a carpenter shop. Beneath the floor was a steam pipe which was in contact with a considerable amount of old lumber and trash. About 6:00 P.M. employees noticed smoke coming through the floor. Several men tore up flooring and entered the underfloor space with a chemical extinguisher. At this time the fire was "about the size of a bushel basket," but was out of reach. One of the men then telephoned to the fire department and another man sounded an alarm from Central Station fire alarm box. The plant was equipped with an automatic fire alarm system, but there was no alarm tubing in this underfloor space because it was understood that the entire floor rested on earth fill, which was true of most of the flooring on the basement level. The plant including newly erected sections was of flimsy construction, largely frame, without proper cut-offs between sections, and not provided with automatic sprinklers. The fire was fought by 14 engine, 3 hose, 3 ladder, and 2 fire boat companies, employing a total of 34 streams, including five turret nozzles. Fire department places the loss at $1,222,741. Loss including interruption to production $3,000,000.

February 18, North Kansas City, Mo.
Larabee Flour Mills Co.
Loss: $1,000,000.

Four men lost their lives and 22 were injured when a dust explosion of unknown origin wrecked portions of the central sections of this plant. While the building was of fire-resistive construction, the dust collecting facilities were inadequate, ventilation was poor, and self-releasing vents were not provided. Heavy damage to the structures was due primarily to the solidity of the structures themselves. Sections most seriously involved included the elevator and cleaning section of the mill. Numerous sporadic fires followed the blast. Due to a serious manpower shortage in the fire department and difficulty in reaching the seat of the fire in sacked flour, bran, and empty bags in bales, the fire burned and smoldered for over 80 hours.

Photo by Acme

Combined business and dwelling blocks contributed to an appalling loss of both life and property

March 6, Rockaway, N. J.
Lend-Lease Warehouse.
Loss: $11,000,000.

An old mill building was leased to the Treasury Department for storage purposes. The building, about 300 feet long and 80 feet wide, two-story and basement, brick and timber construction, was loaded with millions of pairs of shoes, a large quantity of blankets and other materials. The storage was increased until the goods were packed solidly up to the level of the ceiling beams, with very meager aisle space left. Under this load the floors in one section began to sag and the wall bulged out. The wall was shored with braces, but the contents were not removed. Fearing that the sagging floors would cause rupture of sprinkler pipes, the water was shut off. The sagging floors apparently caused a short-circuit in electric wiring. Watchmen smelled burning insulation throughout the night, but did not see any fire and apparently did not cut off the electric current. When employees opened the doors shortly before 8:00 A.M. the entire section burst into flames. The local fire department was immediately called and help was summoned from other fire departments over a large area. The fire, however, was inaccessible for fire fighting, owing to the dense piling, and spread upwards through holes that had been cut in the floors and to other sections through fire walls where fire doors had not been properly maintained. The fire burned with great intensity for more than a week. Fire fighting efforts were concentrated on protecting an adjoining similar warehouse forty feet away, which was saved. Loss estimated at $11,000,000.

April 1, San Francisco, Calif.
San Francisco Warehouse Co.
Loss: $750.000.

A lighted match dropped by an employee in bales of cotton started a fire on the third floor of this unsprinklered four-story brick warehouse. Fire doors were effective in keeping the fire within the north section of this building, but unprotected vertical openings allowed it to spread to the fourth floor and roof. Iron shutters on some windows made access to building difficult for firemen. Failure to segregate various types of storage played a major part in this large loss. Due to the fact that uninsured Government-owned cotton from this warehouse is still being sold throughout the country the loss figure may be subject to some correction.

April 19, Oklahoma City, Okla.
O. K. Transfer & Storage Co.
Loss: $1,000,000.

Fire, apparently due to lightning, completely destroyed the top floor of this 4-story brick and plank on timber storage warehouse and damaged portions of the contents on the second and third floors. Water damage to the remainder of the 2,000 storage accounts, consisting principally of household effects, was heavy. The fire department responded to an alarm from the sprinkler system and found a fire on the second floor. The sprinklers were operating and after the fire appeared to be under control, the sprinkler system was shut off. Later fire was discovered on the third floor, where there was a quantity of wrapping paper and excelsior, having spread through an open space between the flooring and a column. The fire then spread rapidly through a similar space to the fourth floor and was beyond control when the sprinkler system was again turned on, though it is reported that this was done promptly. A pumper was connected to the sprinkler system to supply additional water, but by this time so many heads had opened on the lower floors that little water reached the fourth floor sprinklers. Fire fighting operations were somewhat impeded by blank walls, the windows of which had been bricked up, and the storage of furniture against the inside of barred windows. Because of the numerous claims

by owners of damaged or destroyed property, the loss cannot be established at this time. It is reliably estimated, however, that the loss will approach $1,000,000.

May 2, Lebanon, Pa.
National Steel Boiler Co.
Loss: $575,000.

Explosion of a fuel oil burner sprayed burning oil to the wood trusses of the roof of the heat treating department. This caused a fire which completely destroyed this unsprinklered plant. Some employees were injured by burning oil or were overcome by smoke. When the volunteer fire department arrived, the fire had gained great headway and within 20 minutes the entire roof was involved and in less than an hour the walls collapsed. Steel trusses of a new section of the plant twisted and pulled down practically all of the brick walls. The plant had about 200 employees and was making ship valves and other parts for submarines. A single fire area of over 73,000, sq. ft. and lack of private protection were major factors in this large loss.

May 5, Fort Lewis, Wash.
Military Property.
Loss: $592,723.

Fire destroyed Laundry Unit No. 2 operated by the Army Quartermaster Corps at Fort Lewis, Washington. According to information made available by military authorities, the building was a one-story, frame structure, with cement floor, tarpaper roof and partitions built of lumber. Fire apparently originated in the center portion of the building, which was 271 ft. long and 178½ ft. wide. The structure was not provided with automatic sprinklers. A definite cause for the fire could not be determined, but probable causes are hot blankets pulled from tumblers and placed in baskets and in piles near the tumblers, or spontaneous ignition of unprocessed clothing containing paints, oils, etc. The laundry had been inspected by the Post Fire Chief only a few days before the fire and general conditions were reported to be satisfactory. Additional data of an unofficial nature received by the N. F.P.A. Department of Fire Record indicate that the destroyed laundry was one of two identical units which were located 100 ft. apart. The destroyed unit was engaged in reconditioning of Army goods, including uniforms and other wearing apparel, blankets, bedding and mattresses. The destroyed unit had been running two shifts, with the late shift closing down at midnight, at which time a very large quantity of customers goods was in the building. It is estimated that perhaps 25% of the loss was involved in these goods. It appears that the watchman who was supposed to go on duty immediately after the laundry closed failed to report on the date of the fire and no substitute was provided. About an hour after the laundry shut down, fire was seen simultaneously by a number of persons at remote locations, but not until it had burst through the skylights of the building. The first fire company responded before an alarm was received, the man on watch having seen the fire. One factor of special interest was the apparent failure of the system of fire-reporting telephones which seemed to have been installed as a substitute for a standard fire alarm telegraph system. It is said that about the time the first fire company turned out without an alarm, the telephone on the wall of the laundry was short circuited and showed a red light on the switchboard at the post fire headquarters. Simultaneously several persons attempted to call the fire department over fire-reporting telephones on the post, with the result that the switchboard "took on the appearance of a Christmas tree." Obviously, this type of alarm system does not have the succession feature common to fire alarm boxes, which operate in turn as the circuits are available. The assistant chief who responded with several pieces of apparatus attempted to turn in a second alarm on the telephone in the adjacent laundry, but was unable to contact the operator, with the result that a messenger was dispatched by automobile to fire headquarters. One of the persons who had seen the fire reported the location about a mile from the actual fire, so that one company had to be dispatched to this location before it could proceed to the actual fire. The fire chief was off duty, but a message was sent to his home and the chief was fortunate in getting the operator at headquarters switchboard by telephone and ordered an additional fire department response.

May 6, Montreal, Que.
Pier Storage Shed.
Loss: $645,000.

Fire caused by an acetylene welding torch destroyed an 1800-foot long frame metalclad pier shed owned by the Dominion Government and leased to Canada Steamship Lines, Ltd. The unsprinklered shed housed huge quantities of rationed or scarce commodities destined for reshipment, possibly overseas. These included sugar, hemp, wire, rope, dehydrated foods, tea, alcohol in drums and a number of shell casings. Ten trucks and three tractors and trailers parked in the shed were also destroyed. Fed by the highly combustible commodities and the contents of bursting alcohol drums, the fire spread throughout the entire structure so rapidly that employees barely escaped with their lives. The fire department used no less than 23 hose streams, but could not save the property.

May 17, Wichita Falls, Texas.
Cotton Warehouse.
Loss: $530,000.

Fire discovered by a watchman at 5:21 A.M. involved the entire west section of a 1-story iron-clad warehouse owned by the Northwestern Compress Co. The section covered an area 300 by 250 ft. Cause of the fire is not known. The burned section of the unsprinklered warehouse contained 4,887 bales of cotton of which 136 bales were salvaged. The fire department used 7 hose streams and were able to stop the fire at the first fire wall. Fire spread so fast that employees on duty had to leave before water could be turned on in private hydrants.

May 24, Red River, Texas.
Military Property.
Loss: $2,000,000.

Fire of unknown origin starting at 8:30 A.M. swept through a storage building 180 ft. wide and 500 ft. long, housing rubber stock. The fire was fought by 3 near-by public fire departments, as well as fire equipment from the Red River Ordnance Depot and the Lone Star Ordnance Plant.

June 12, Boston, Mass.
Tenant Manufacturing.
Loss: $800,000.

This incendiary fire in a brick and plank on timber building occupied by tenant concerns with war contracts, is believed to have originated in a section occupied by a woodworking concern. A severe explosion of lacquer thinner vapors occurred, causing the collapse of a section of the building and crippling the sprinkler protection. The body of a man, who was apparently committing a theft of lacquer at the time, was found after the explosion. The fire spread to other sections of the building rapidly, as fire doors had mostly been blown off by the explosion. Windows were broken and sashes burned in an exposed structure, but the operation of some fifty sprinklers, together with outside sprinklers, kept the fire out of this building. Loss was expected to exceed $800,000.

June 13, St. Laurent, Que.
Glass Works and Rubber Plant.
Loss: $1,424,368.

Fire of undetermined origin swept through the factory of the Industrial Glass Works Co., Ltd., and spread to the plant of the British Rubber Co. of Canada, Ltd., resulting in a loss placed at $1,424,368. The fire started at 2:15 A.M. on the mezzanine floor of the glass works about ten minutes after the watchman had gone through the section on his round. Fire was first seen in the single story section of the unsprinklered building, which was of brick and steel frame construction, by employees who were working on the night shift in the 4-story fire-resistive melting house. They called the fire department at once. Driven by a brisk wind, the flames spread with great rapidity, generating intense heat that soon set fire to the rubber plant, 60 ft. south. The single-story section of the glass works was destroyed and heavy damage was caused to the 4-story section. The rubber factory, also an unsprinklered single-story brick steel frame building, was burned to the ground. A deficient public water supply and lack of automatic sprinklers aided in the destruction of these two plants.

July 6, near Oil City, Pa.
Oil Refinery.
Loss: $725,000.

Eight men lost their lives and several others were injured in an explosion and fire that damaged this new 100-octane gasoline plant owned by the Defense Plant Corporation and operated under lease by the Pennzoil Company. Information about this fire has been largely suppressed, but reports indicate that the alkylation unit was involved and two fractionating towers were seriously damaged. Some near-by frame structures were also destroyed. The first flash is said to have occurred while repairs were being made to a valve in the gas concentration system. This was followed by a series of explosions. The fire was fought by the volunteer fire departments of Oil City and several near-by towns.

July 9, Chicago, Ill.
Boynton & Co.
Loss: $600,000.

This fire started in lumber piles from an unknown cause, spread to adjoining frame lumber sheds and then through unprotected exposures of the three-story brick unsprinklered section of this woodworking plant. The fire department was handicapped by the intensity of the fire due to the combustible contents, the direction of the wind and a railroad embankment. The severity of the exposure, together with the rapidity with which woodworking occupancies burn, caused a

(Continued on page 20)

WORKMEN'S COMPENSATION in the United States

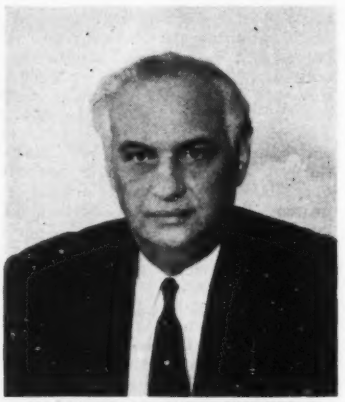
A DEPARTMENT DEVOTED TO THE BOARDS AND COMMISSIONS ADMINISTERING STATE WORKMEN'S COMPENSATION LAWS

MICHIGAN

THE legislature of Michigan at its first extra session of 1912 enacted a simple workmen's compensation law providing modest benefits to employees incapacitated through accidents "arising out of and in the course of their employment." The law was, of course, in substitution for the common law system then in force and was adopted only after a prolonged legislative controversy in which organized business through its manufacturers' association supported the proposal, and organized labor not then too well established in Michigan opposed it. The act was elective, provided that benefits to injured employees might be secured through insurance in a private carrier, a newly created competitive state fund or self-insurance, and created the Industrial Accident Board to be appointed by the governor as the administrative body. To this board as its first chairman was appointed John H. Kinnane, a lawyer of Bay City, and as its first secretary Governor Osborne appointed Richard Drake, a labor official identified with the printing trade union movement in Detroit.

The new law was generally accepted by Michigan employers and during the first years of its operation few changes in its benefits or administrative provisions were either proposed or adopted. With the passage of similar acts in other states, however, and with the constantly increasing experience of employees and employers in the practical operation of the new system, changes in both the benefits and the administrative procedure were bound to come, so that the Michigan Workmen's Compensation Law of today resembles only in its general form the act of 33 years ago. Changes in benefits, too numerous for recording here, were adopted during the first 30 years of the existence of the act and the one-time "Industrial Accident Board" is now the "Compensation Commission", which is in turn a division of the State Department of Labor and Industry. In its biennial report for the period ending July 1, 1944 the Commission calls attention to the changes effected in the law and practice during the preceding two years. These may be summarized as follows:

JAMES L. HILL



CHAS H. MAHONEY

BETTY W. ALLIE

VINCENT F. McAULIFFE

JOE M. MOORE

The law is now compulsory for employers of eight or more persons and elective in the case of employers

of fewer than eight. With this change the number of employers under the act has increased approximately from 40,000 to 52,000.

Protection afforded individual employees has been broadened by the substitution of the term "injury" for the term "accident" and while this question is still to be considered by the courts it is thought by the Commission that the act now provides compensation for personal injury even though there is no accident in the sense in which that term is generally understood.

Occupational Disease features of the act have been broadened with the substitution of a general coverage in place of the 31 specific diseases previously scheduled. In dust disease cases the aggregate total amount which may be paid in compensation has been increased from $3,000 to $4,000.

General increases in maximum weekly benefits in temporary total disability cases, in loss of members and in fatal cases have been adopted and free hospitalization and medical care is provided for six months, with a possible additional six months, instead of the previous limit of 90 days.

Changes in the method for computing the average weekly wage have been adopted to provide a floor of not less than forty times the hourly rate and the first week of disability is now payable when such disability extends beyond four weeks, instead of six weeks as previously provided.

Employers are authorized to pay compensation direct to the injured employees without the formality of filing an agreement and in cases where an employer appeals from a decision of the Commission he must furnish the employee with a copy of the testimony necessary for the appeal.

A Second Injury Fund has been created, financed by payment of $1,000 into the State Treasury by employers of fatally injured workers having no dependents. The loss of an eye, hand, arm, foot, or leg in cases where such an organ or a member has been previously lost entitles the injured employee to compensation for total and permanent disability for 750 weeks. This is paid out of the Second Injury Fund, the employer with whom the injured employee is engaged at the time paying only the compensation specified by the act. The Second Injury Fund became a part of the law July 30, 1943, now has 97 deposits totaling $95,026.35. The law provided that no benefits should be paid from the fund until 150 weeks after the date of its creation.

Six deputy commissioners serve the Commission, and are assigned to hear all controverted cases in the first instance. Three are located in the Detroit area, and three outstate and in the upper peninsula. Hearings are held in the counties where the injuries take place. The last recorded report —July 1, 1943 to June 30, 1944, shows 2,743 applications for hearings filed, and 4,627 hearings scheduled. Aggrieved parties may appeal to the full Commission from the deputy's decision and again from the opinion of the full Commission to the Supreme Court for a final determination. There were 47 appeals to the Supreme Court during that period.

Michigan being the center of war production, employment has naturally reached peaks during the war period. Accordingly, compensable injuries have increased due to these peaks of employment partly, and further to the fact that inexperienced men and women suddenly found themselves a part of a fast-moving production line. In the fiscal period 1943 to 1944, 38,117 compensable injuries were reported, the highest figure ever recorded in Michigan. $7,377,371 was paid in total compensation during that period. In the six months' period from July 1, 1944 to December 30, 1944 compensation benefits totaled $4,193,556. Working permits for minors increased from a total of 3,710 in 1939 to more than 80,000. Women constituted approximately 25% of the total employment.

Mrs. Betty W. Allie, Chairman of the Michigan Commission, in commenting upon the history of compensation legislation in that state says, "We believe Michigan now ranks among the first states in Workmen's Compensation benefits with its all-inclusive coverage to large numbers of workers, its improved medical benefits, all-out occupational disease coverage, enlarged benefits for loss of limb and vision, and in dependency cases."

The members of the present Compensation Commission are:

BETTY W. ALLIE, Chairman

First entered state service by appointment of Governor Woodbridge N. Ferris as his secretary in 1916. Since then has served Michigan under six governors. She was first appointed a Commissioner of the Department of Labor and Industry by Governor Frank D. Fitzgerald in 1935. She was reappointed to the Commission by Governor Harry F. Kelly in February, 1943 and in April, 1943 was designated Chairman by Governor Kelly. Mrs. Allie is presently a member of the Legislative Committee of the International Association of Industrial Accident Boards and Commissions.

JAMES L. HILL

Was first appointed to the Department of Labor and Industry as legal advisor in 1936. Remained in that capacity until 1941 when he was appointed a Commissioner of the Compensation Commission by Governor Murray D. Van Wagoner. He was reappointed by Governor Harry F. Kelly in 1943 and again in 1945.

VINCENT F. McAULIFFE

First entered the service of the Department as a Deputy Commissioner in the Detroit office while engaged in the private practice of law. Prior to that time Mr. McAuliffe had been an Assistant U. S. District Attorney. He was appointed a Commissioner of the Compensation Commission by Governor Harry F. Kelly in March, 1943.

JOE M. MOORE

First entered the Commission's service in 1943 when he was appointed Secretary of the Department of Labor and Industry. Prior to that time he had been associated with the Secretary of State as Director of Equipment and Supply, and previous thereto with several chambers of commerce in the advertising field. Mr. Moore is a veteran of the first World War.

CHARLES H. MAHONEY

Was first appointed a member of the Compensation Commission by Governor Frank D. Fitzgerald in 1939. He was reappointed to the Compensation Commission by Governor Harry F. Kelly in 1943. Mr. Mahoney is an insurance president in private life. He has also served for many years on the Wayne County Board of Supervisors and on the Detroit City Planning Commission.

The Compensation Commission operates through six divisions handling correspondence, insurance, arbitration, legal, auditing and statistics, employing in all forty-five persons. This is a remarkably small number of employees when the volume of work to be handled annually is considered and reflects credit upon the administration, especially since the legal, auditing and statistical divisions serve not only the compensaton commission but the Commissioner of Labor as well.

ATOMIC DISTURBANCES

(Continued from page 3)

the decision in S.E.U.A. and Public Law 15. Efforts along this line are already progressing, with some accomplishment. We hope and believe that ultimate success will be obtained and that the business may continue as a private undertaking with advantage to itself and those for whose service and benefit it operates. Such success will come only through a composing of such differences of opinion as may presently exist in the business. Unless those differences are composed the action of the Supreme Court in the S.E.U.A. case may prove to have been very much in the nature of an atomic disturbance.

FULL COVERAGE

Devoted to Underwriting and Technical Problems
of
Inland Marine and Aviation Insurance

by
W. H. RODDA

PERSONAL AIRPLANES—TOYS OR TRANSPORTATION

WILL post-war airplanes be comparable to yachts as pleasure craft for the semi-wealthy, or will they be a new form of personal transportation? The answer to this question will greatly influence the importance and nature of Aviation Insurance within the foreseeable future.

The personal airplane is now principally in the class with motor boats and yachts. The owner of a small plane must have an income in excess of $6,000 per year in order to meet the high operating cost of today's craft. The typical aviation enthusiast uses his ship for week end flights to vacation points or for the enjoyment of flying around neighborhood airports "building up time". He is lucky if he uses it more than 100 hours a year.

The high cost of a plane in comparison to its utility has brought about the Flying Club, in which several people cooperate in the purchase and use of the ship. Flying Clubs are essentially for sport and training purposes and seldom contemplate practical use of the aircraft.

Limited usefulness of present day airplanes is due to four factors. First, the initial cost and upkeep are high in comparison to that of the automobile, (which is the airplane's competitor for personal transportation.) Second, the airlines are fair weather highways. The equipment, training and skill necessary to fly in 95% of all weather, as the scheduled air lines do, is entirely beyond the reach of the average flyer. Third, the airplane is a long distance vehicle—it cannot be used for grocery shopping or for running over to a bridge party on the other side of town. Fourth, the conventional three-control plane is a difficult thing to handle. At least forty hours of training are necessary before a pilot can secure a private license and be considered competent to carry a passenger.

There are prospective changes in design which will broaden the everyday use of the private airplane. Some of the new models have their controls patterned after those of the automobile and they are much easier to fly. Notable among these is the Ercoupe, which has a steering wheel much like that of an automobile. The wheel is turned to the right or left in order to turn the ship, and it is pulled toward the pilot to point the nose of the ship up, and pushed away in order to point the nose down. Rudder and ailerons are coordinated, which eliminates the necessity for any foot controls such as the rudder pedals of the conventional plane. It is significant that the minimum number of hours to secure a license to fly such a ship is much less than for the conventional type. Other improvements are on the way and another fifteen years will undoubtedly see a personal airplane which will approach the automobile in simplicity of control.

The insurance underwriter is skeptical when told that he is largely responsible for the high cost of flying. It is true that insurance is one of the principal expenses, and can easily exceed the total cost of gasoline, oil and mechanical maintenance. A Civil Aeronautics Authority report on Private Flying showed figures for a typical plane where the cost of insurance for one year would be $467.00; whereas the total Operating cost, rent and depreciation would vary from $557.00 to $734.00, depending upon the hours of use. It is obvious that a major reduction in insurance costs would tremendously encourage private flying.

Fortunately there is good reason to expect a general reduction in the cost of insuring airplanes. The most expensive protection is Flight Insurance, which is commonly given the unfortunate term "Crash Coverage". Many of the more skillful pilot owners do not carry flight insurance. They feel that it is unnecessary because they do not expect to have a "Crash". However, financial institutions who finance airplanes require flight insurance in order to protect their equity. They will not take a chance on the skill of the pilot. The result will be a better spread of flight insurance over expert as well as inept pilots.

Aviation is still a young industry and is afflicted with operators who do not know the value of controlling fire hazards. The average airport used by private planes is sloppily maintained, has its fire hazards in the midst of highly flammable and valuable planes, and has no effective means for combating the inevitable fire. The petroleum industry and the moving picture industry show what can be done to reduce the fire loss in plants handling flammable materials. As the aviation industry grows up, we can expect fire control measures to improve, with resultant lowering of insurance costs.

Weather will remain a serious handicap to private flying. "Blind flying" instruments cost more than a small plane and are not practical unless the ship is in daily use. In addition, a highly skilled pilot is needed to use them. However, "contact" flying (by visual contact with the ground) is possible most of the time over much of the United States. Furthermore, we can expect the helicopter to be developed into a device for common use and it will be usable in all but the foulest of weather.

Another development will affect the all-weather qualities of private planes as well as their utility for all-around use. That is the probability of a roadable airplane. A major objection to the roadable plane idea has been that it would be either a poor airplane or a poor automobile. However, it would not matter if the device were a poor automobile, if it were a good airplane. It would be used on the ground only for short distances and in weather emergencies. Slow speeds are the rule for city travel and in bad weather. The roadable airplane idea is entirely feasible and the mechanical problems can

(Continued on page 24)

INSURANCE NEWS DIGEST--FIRE AND CASUALTY

Covering Period From July 1, 1945 Through July 31, 1945

661. NO MUTUAL CONVENTION. Philip Baldwin, Secretary of National Association of Mutual Insurance Agents, has announced that following a conference with the officials of that organization a decision has been reached to hold no annual convention this year. This action was taken as a measure of cooperation with the Office of Defense Transportation and as a contribution to the war effort.

662. FINANCIAL RESPONSIBILITY LAWS. A number of states recently enacted automobile financial responsibility laws of a pattern requiring automobile drivers experiencing an accident to meet any judgment laid against them, or give evidence of future financial responsibility under penalty of losing their license to drive. The law in Oregon will become effective June 16, 1945; Nebraska, August 10, 1945; Minnesota, July 1, 1945; Illinois, Maryland and Wisconsin, January 1, 1946 and Pennsylvania, July 1, 1947.

663. MUST INSURE. State Board of Education of Virginia has notified eleven county school superintendents in that state that school buses must be covered by public liability and property damage insurance not later than August 10. The state legislature of Virginia at its recent session amended the law to specify that all county or privately owned buses must be insured by that date.

664. AGENTS ORGANIZE. Mutual insurance agents of Arkansas, recently meeting at Little Rock, organized their own state association with George McKinney, Fayetteville, as its first president. The organization meeting was addressed by J. C. McGee, of Jackson, Mississippi, vice-president and director of National Association of Mutual Insurance Agents; John A. Arnold, vice-president, National Retailers Mutual Fire Insurance Company, Chicago; Lee E. Davis, Dallas, Texas, director of the National Association; and R. C. Merritt, agency director, Lumbermens Mutual, Chicago.

In addition to President McKinney, other officers elected are Elmer Adams, Harrison, first vice-president; E. Walden Williams, Fort Smith, second vice-president, owner of the Mutual Insurance Agency; and W. M. Ritter, Little Rock, secretary-treasurer; directors, Hershel Lewis, Lewis & Norwood, Little Rock; Cathel Hendricks, Texarkana; H. C. Berryman, Russellville; Curtis Noble, Marked Tree, and John Henry, El Dorado.

665. BINDERS REGULATED. The Insurance Commissioners of Zone 2 which includes the states of South Carolina, North Carolina, Virginia, West Virginia, Ohio, Pennsylvania, Maryland and Delaware, at a recent meeting held at Columbia, South Carolina adopted a resolution calling upon each state to prescribe regulations governing the issuance of binders, and suggesting principles that should be embodied in such regulations. After setting forth that a widespread misuse of fire insurance binders prevails in the Zone 2 states and that since the unregulated use of such binders tends to nullify the effective regulation of fire insurance rates and to encourage rebates and discriminations, the Commissioners adopted the following resolution:

Be it resolved:

1. That in the light of the recent decision of the U. S. Supreme Court in the S.E.U.A. case the effective regulation of the use of fire insurance binders is imperative and each state is urged to prescribe definite methods of handling them.

2. That the following rule be recommended to the several states as a model and the promulgation of a similar ruling in the several states is urged:

1. Binders or temporary contracts of insurance may be written, provided the premium applicable to the risk covered shall be payable and shall be paid for the time the insurance is in force by virtue of such binder or temporary contract of insurance.

2. Binders must be written for a definite period, which shall not exceed 15 days. No risk shall be carried under binder for more than 15 days.

3. In all cases where insurance is granted under binder, the policy when issued must be written to commence at the date on which the binder or temporary contract was effective.

4. In the case of the termination of a binder without the issuance of a policy, the premium shall be charged as follows:

(a) If canceled on the order of the company or for non-payment of premium, cancellation shall be on a pro rata basis.

(b) If canceled upon request of the insured, cancellation shall be at usual short rate.

(c) If binder terminates without issuance of policy, premiums must be charged at usual short rate except as provided in (a).

5. No binder shall be marked off without proper charge being made for the time during which liability has been covered under the binder.

6. All binders shall be written at the rates fixed by the West Virginia Inspection Bureau at the time the binder was issued. If no published or minimum rate, rate shall be applied for.

7. Duplicate of all binders must be sent to the stamping office for filing. Binders will be recognized only as of date of filing.

8. When a binder is replaced by a policy, the daily report must indicate such fact.

9. All binders are subject to the conditions, if any, prescribed by law for the standard policy of the state of West Virginia.

10. All binders shall bear consecutive numbers.

BINDER

No. . . . . .

. . . . . .Insurance Company of. . . . . .

In compliance with the application of the insured named herein and pending the issuance of policy, the. . . . . .(Name of Insurance Company) does hereby agree to hold bound for a term not exceeding 15 days from the. . . . . .day of . . . . . .19 . ., at noon. . . . . to the. . . .day of. . . . . ., 19 . ., at noon, against . . . . . .loss or damage by . . . . . ., for an

(Insert coverage)

amount not exceeding . . . . . dollars, to the following described property of. . . . . .while located and contained as described herein, subject to the conditions hereinafter provided:

$. . . . . On . . . . . .

Location. . . . . .

City of . . . . . .State of . . . . .

It is a condition of this agreement that if, for any reason, the said company should decline to issue a policy in lieu hereof, then the liability of said company under this binder shall terminate at 12 o'clock noon of the next business day after the risk is declined by notice to the insured or to the representative of the insured placing the risk.

FIFTEEN DAY STIPULATION

It is also a condition of this agreement that liability hereunder shall terminate with the issuance of the policy and in no event shall continue for a longer period than 15 days from the date hereof. All terms and conditions of the policy regularly issued by the company in the state where the property is located, which are not inconsistent with the provisions of this binder, are made a part hereof to the same extent as if fully set forth herein and in the event of loss the expiration of this binder the premium due herein shall be fixed at the full annual premium for the sum covered. In consideration of the company assuming liability under this temporary contract of insurance, pending such investigation as it may wish to make in respect of the risk, the assured by the acceptance of this contract waives any rights he may have in the matter of cancellation and termination of liability inconsistent with the provisions of this binder and agrees that such cancellation or termination of liability may be had as provided in this contract.
Dated at . . . . . .this. . . . . .day of . . . . . .19. .

3. That a ruling be adopted in each state requiring all such fire insurance binders to clear through the state stamping office, where such offices exist, in order that full compliance with such regulations may be enforced.

The Commissioners further urged that similar rulings be adopted, where applicable, to the several lines of casualty insurance.

666. ARIZONA LEGISLATION. Following the recent filing of an initiative petition bearing twice the required number of signatures, submitted to the people of Arizona for a vote at the general elections in November 1946, of the fire rating and parts of another bill dealing with agents' qualification and licensing, Attorney General Sullivan of that state has rendered an opinion on the immediate effect of such action. The Attorney General points out that the filing of the referendum petition suspends the operation of the laws in question and if at the election in November 1946 the law is approved by the people, it will then become effective, in which case the legislature cannot amend or repeal such law. He also calls attention to a provision of the Constitution that the veto power of the Governor or the power of the legislature to repeal or amend shall not extend to initiative or referendum measures approved by a majority vote of the qualified electors. Arizona Insurance Director Rummage is reported to have expressed a belief that under Attorney General Sullivan's opinion the people's rejection of the two laws in question would mean that no fire rating bill enacted in the future could become effective unless approved by another vote of the people.

667. TO TEACH INSURANCE. Announcement is made of the appointment of Dr. Robert I. Mehr, former assistant professor of economics at the University of North Carolina, as associate professor of business administration at Butler University, Indianapolis. Dr. Mehr will take up his new duties in September and will specialize in the teaching of insurance subjects. Prior to his connection with the University of North Carolina, Dr. Mehr taught at the University of Alabama, and University of Pennsylvania.

668. FINANCIAL RESPONSIBILITY LAW. Just prior to its final adjournment the Illinois State Legislature enacted the motorists financial responsibility bill and sent it to Governor Green for his signature. The measure provides that effective January 1, 1946, any motorists involved in an accident involving $50 or more damage must report within ten days to the Division of Motor Vehicles and show financial responsibility either in the form of a cash bond or certificate of insurance. The governor is expected to approve the measure.

669. DEFINITION AMENDED. Commissioner of Banking and Insurance, L. B. Carey of New Jersey, has notified fire, marine, and casualty companies that the nationwide definition and interpretation of the insuring powers of marine and transportation underwriters has been amended to permit the writing of an inland marine form providing multiple perils coverage on merchandise of an assured's customer accepted by the assured for processing, transportation, and storage in cold storage lockers.

670. FIRE PREVENTION WEEK. President Truman has issued a proclamation calling for the observance of the week of October 7-13 as Fire Prevention Week. In calling attention to these dates the National Fire Protection Association stresses the fact that the fire waste in the United States is the highest in the world, averaging about $4.00 per capita compared to a normal fire loss in England of less than $1.00 and in Germany of less than 50 cents per capita. At the present rate, the United States fire loss in 1945 will exceed $450,000,000 plus a human toll of some 10,000 lives.

671. I.R.M. GROUPS COMBINE. Announcement is made that as of Aug. 31 the Sprinklered Risk Mutuals will discontinue the writing of policies and that thereafter policies of that group as they expire will be renewed by policies of the Improved Risk Mutuals. The underwriting companies of the two groups are identical and H. F. Russell, General Manager, states that the change is in the interest of efficiency and economy and is actuated by a desire to increase services to all policyholders. It is stated that the change is without anticipated change in the rate of savings to policyholders.

672. O.D. LAW INVALID. The Minnesota Supreme Court in an opinion filed July 6, 1945 in the case of Hunter v. Zenith Dredge Company, held a portion of the state workmen's compensation law dealing with occupational diseases unconstitutional. The provision involved was Sec. 176.66 of the 1941 Minnesota Statutes as amended by Section 11, Chap. 633, Laws of 1943. The section provides for the medical examination of an employee by a medical board whose findings are filed with the Industrial Commission. The case turned upon the failure of Section 176.66 of the law to contain a requirement making it necessary for the medical board to file a transcript of the evidence upon which its findings are based, such failure having the effect of denying the claimants a right of review under the due process clauses of both the State and Federal Constitutions. The court held the statute, insofar as it creates the medical board and sets out its functions, is null and void.

673. INSURANCE COMMITTEE. Eric A. Johnston, president of the Chamber of Commerce of the United States, has announced the appointment of 33 leading insurance executives to serve on the Insurance Department Committee of the National Chamber for the year 1945-46. Heading the committee is Chester O. Fischer, Vice President, Massachusetts Mutual Life Insurance Company, as chairman, and Carl N. Jacobs, President, Hardware Mutual Casualty Company, as vice chairman, both being Chamber Directors. The personnel of the Insurance Committee is as follows:

Life Insurance--Chester O. Fischer, chairman, Vice President, Massachusetts Mutual Life Insurance Company, Springfield, Mass.; Paul F. Clark, President, John Hancock Mutual Life Insurance Company, Boston, Mass.; Fred Conklin, President, Provident Life Insurance Company, Bismarck, North Dakota; Lee J. Dougherty, Vice President, Occidental Life Insurance Company of California; Davenport, Iowa; William J. Graham, Vice President, Equitable Life Assurance Society of U. S., New York City; Walter W. Head, President, General American Life Insurance Company, St. Louis, Mo.; Frederick W. Hubbell, President, Equitable Life Insurance Company of Iowa, Des Moines, Iowa; Francis V. Keesling, President, West Coast Life Insurance Company, San Francisco, California; Lau-

rence F. Lee, President, Peninsular Life Insurance Company, Jacksonville, Florida; James L. Madden, 2nd Vice President, Metropolitan Life Insurance Company, New York City; John A. Stevenson, President, Penn Mutual Life Insurance Company, Philadelphia, Pa.; and Frazar B. Wilde, President, Connecticut General Life Insurance Company, Hartford, Conn.

Casualty Insurance--Carl N. Jacobs, vice chairman, President, Hardware Mutual Casualty Company, Stevens Point, Wisconsin; Rollin M. Clark, Vice President-Secretary, Continental Casualty Company, Chicago, Ill.; John A. Diemand, President, Insurance Company of North America, Philadelphia, Pa.; Charles E. Hodges, President, American Mutual Liability Insurance Company, Boston, Mass.; W. E. McKell, President, New York Casualty Company, New York City; Walter E. Otto, President-General Manager, Michigan Mutual Liability Company, Detroit, Michigan; Otto Patterson, Executive Vice President, American Automobile Insurance Company, St. Louis, Missouri; and John L. Train, President, Utica Mutual Insurance Company, Utica, N. Y.

Fire Insurance--Marshall B. Dalton, President, Boston Manufacturers Mutual Fire Insurance Co., Boston, Mass.; Hovey T. Freeman, President, Manufacturers Mutual Fire Insurance Company, Providence, R. I.; Charles C. Hannah, President, Fireman's Fund Insurance Company, San Francisco, Calif.; W. Ross McCain, President, Aetna Insurance Company, Hartford, Conn.; John A. North, Vice President, Phoenix Insurance Company, Hartford, Conn.; Herman J. Pelstring, President, Pennsylvania Lumbermen's Mutual Fire Insurance Company, Philadelphia, Pa.; L. G. Purmort, President, Central Manufacturers Mutual Insurance Co., Van Wert, Ohio; Chase M. Smith, Secretary, National Retailers Mutual Insurance Company, Chicago, Ill.; Walter Beyer, Vice President, The Home Insurance Company, New York City; and John M. Thomas, President, National Union Fire Insurance Company, Pittsburgh, Pa.

Agents and Attorneys--Judd C. Benson, General Manager, Home Office Agency, Union Central Life Insurance Company, Cincinnati, Ohio; Lawrence Kennedy, President, Marsh & McLellan, New York City; Guy T. Warfield, Warfield-Dorsey Company, Inc., Baltimore, Md.; and Tom Watters, Watters-Cowan & Baldridge, New York City.

674. INSURANCE COURSES ANNOUNCED. Dean F. H. Elwell of the University of Wisconsin School of Commerce has announced a complete curriculum in the field of insurance for the fall semester. The announcement states that the return of faculty members who have been on leave during the war emergency will enable the school to resume training in all fields of insurance including life, fire, casualty, and others. Both full four-year courses or refresher courses are to be made available and students will find it possible to secure instruction to suit their particular requirements, including preparation for examination for the C.L.U. certificate and the C.P.C.U. designation. Students with a preference for the technical side of insurance are encouraged to consider the actuarial field as a possibility for high grade and stable employment, while for the general student emphasis is placed upon well rounded training for managerial positions in the home office and the agency field, as well as in the insurance departments of industrial and commercial organizations.

675. GERMAN DIRECTOR OF INSURANCE. Colonel Reese S. Hill, former head of the War Department's Contract Insurance Division, has been assigned to Germany to serve as Director of Insurance under the Allied Control Commission in that country, so it is reported. It is said that the task of Colonel Hill in collaboration with State Department representatives, will be to de-Nazify and de-cartelize the German insurance industry.

676. DIVIDEND REDUCTION. Michigan Millers Mutual Fire Insurance Company of Lansing has announced a reduction in dividends to policyholders to be effective September 3, following which the rate will be 15% on all lines except dwelling, apartments and their contents occupied solely for dwelling and apartment purposes. On these lines the rate continues at 20%. In making the announcement, President S. L. Baker stated that during the past two or three years the losses have been especially heavy, there have been drastic reductions in rate levels and coverages have been broadened, with the result that conservative management demands a readjustment of the dividend scale.

677. INSURANCE DIRECTOR. Edward McMonigle, a special agent of the General of Seattle, formerly a local agent at Boise and one-time vice president of the Idaho Association of Insurance Agents, has been appointed Director of Insurance for the State of Idaho.

678. DIEPENBROCK RESIGNS. R. G. Diepenbrock, Actuary of the Missouri Insurance Department since May, 1942 has resigned to accept a position as assistant to President George F. Manzelman of North American Accident of Chicago. Mr. Diepenbrock was formerly actuary of the Old Continental Life of St. Louis, following which he occupied a similar position with the State National Life of St. Louis, where he continued until he went to the Missouri Department.

679. SELF INSURANCE REJECTED. The Minneapolis City Council by a vote of 3 to 2 of its Ways and Means Committee, has rejected the proposal that the city establish a self insurance fund. The proposal was sponsored by Alderman Henry Bank, who argued that such a plan would save Minneapolis $25,000 a year. Opponents took the position that the city should not enter the insurance business.

680. NORTH CAROLINA RATING BUREAU. Commissioner Hodges of North Carolina has announced a meeting of fire and casualty company representatives to be held at Raleigh September 20-21 to organize the North Carolina Fire Insurance Rating Bureau pursuant to the recently enacted law. Since attendance must be limited to 50 persons from outside the Raleigh area, Commissioner Hodges requests that the various companies and organizations arrange for joint representation so far as possible.

681. MORE COMMISSIONS. The Executive Committee of the Mississippi Association of Insurance (stock) Agents is reported to be pressing for increases in regular and contingent commissions in that state "even though E. L. Williams, head of the Insurance Executives Association, has stated that commissions are too high." The organization is said to be conducting an agency cost survey by questionnaire to determine the "take home" pay of Mississippi agents.

682. FLEET SUPERVISORS SCHOOL. The Institute of Public Safety of Pennsylvania State College of State College Pennsylvania, announces the 7th Annual Short Course for Motor Vehicle Fleet Supervisors to be held at State College September 10th to 14th, 1945. The course is on the selection, training and supervising of police personnel and will be under the direction of Amos E. Neyhard, Institute of Public Safety, State College, Pennsylvania. National organizations included among those sponsoring the course are: American Mutual Alliance and National Conservation Bureau.

683. INDIANA TAX. Indiana's 3% premium tax on out-of-state companies has been held illegal in a 3 to 2 opinion rendered by 5 Marion County Superior Court judges in the test case brought by Prudential Life to recover something over $400,000 in premium taxes paid the state on 1944 business. The decision was not unexpected and the case will undoubtedly go to the United States Supreme Court.

"The Veteran Returns to Industry"

By M. H. KRONENBERG, M.D.
ASSISTANT MEDICAL DIRECTOR, CATERPILLAR TRACTOR CO., PEORIA, ILLINOIS

MANY veterans returning from service will offer no particular medical or placement problems to industry. Many will return better qualified for positions requiring greater skills and responsibilities than before, due to the training and experience acquired in the armed services. Maturity of viewpoint and capacity for cooperation and leadership will have been developed in them. They will be valuable assets to industry.

Others will offer varying degrees of medical and placement problems. In some of these cases industry may not be able to do much to help them with their problems. Some will require further hospital and medical care. But at least an honest attempt should be made to place them in some gainful occupation before turning them away to again become the "Forgotten Men". I firmly believe that there is hope for a large majority of these physically handicapped individuals, and I am just as firm in my belief that American Industry will continue to lend a helping hand.

In the course of processing the returning veteran at Caterpillar Tractor Co., I have been in contact with those who were unable to "make the grade" for military service, either because they were emotionally unstable or mentally incapable during the period of making the necessary adjustments to military life, or they were physically unsuited to the rigors of training and discipline, and so were separated before experiencing any combat service. Also, I have seen those who though not exposed to combat, have been the victims of disease, either in the States or on foreign shores, and had therefore been discharged. There were others who had been injured in combat or suffered some degree of "nervous breakdown" as a result of combat or near combat service. Then there were still others who had made good progress in the armed services up to a certain point but from then on were not able to adjust themselves to all of the experiences and conditions imposed, for one reason or another. We must remember, however, that by far the largest majority of our citizens cannot readily adjust themselves to every new environment or situation to which they are exposed in life, and the same thing is just as true of the men in our armed forces. But this does not mean that such individuals are not employable. They have always been with us.

In the handling and processing of the veteran who returns to industry, we must not go back to the days of the employer who had in his mind the thought, "Why should I hire a half-man if I can hire a whole-man." I hope and believe that this faulty thinking does not exist with forward-looking management today. After all, who can answer the question: "What is a whole-man?" Is not a man's capacity to work the result of more than his anatomical make-up?

Actually, rehabilitation and assisting the handicapped is not a new venture for industry. Management was providing employment for those with physical impairments long before this war started.

As I view it, rehabilitation is the product of several forces. Chief of these is the effect of medicine and surgery; but, as a supplement to these forces, we must include the social and economic influences, and gainful employment stands out as a "must". Work provides activity and interest, and tends to reduce worry and preoccupation with symptoms. Furthermore, the problem of placing the veteran in industry is an individual one in each case coupled with good common "horse sense" thrown in. Therefore, all factors of health, ability, training, personality and specific injury sustained must be evaluated, taking into consideration physical capabilities as well as limitations, and assisting the impaired individual to choose his work or be properly placed. He should not just be "put on a job" where he will not be able to do his best. He must be a self-sustaining member of society for the balance of his productive life, and must know that in his own mind.

In order that there shall be no misunderstanding, it is important first to establish and adopt a clear, well-defined company policy if veterans are to be successfully employed. It must also have the earnest support and sympathetic assurance of top management. "Caterpillar's" program had such support and assurance, and those concerned with it were able to draw upon many years of experience in the placement of other handicapped employees already on the job. By knowing what had been done in pre-war years in placing various types of handicapped persons, we were better able to attack the problem of the returning veteran. This, of course, necessitated a job analysis, with emphasis on the physical activities demanded of the individual, as well as work requirements. In addition, the potential or actual hazards or exposures were evaluated and appraised for specific jobs or work areas.

Such analysis or study involved the cooperation of the Safety, Personnel, Medical and Training Divisions, as well as factory supervision. We then knew the types of jobs which were available in the plant for individuals with physical limitations.

Such an approach cannot be overemphasized. We have examined veterans who could not be assigned to do work above the ground level, such as scaffold jobs or overhead crane operations. Others we could not expose to excessive temperatures, either high or low. Still others were not suitable in environments exposing them to dusts or wet conditions. Noise was also a disturbing factor to some. A certain percentage presented placement problems in connection with weight lifting, pedal operations or continued standing.

I mention this because too often people have associated disablement from war with only visible physical injury of some kind. For example: amputations, loss of sight, etc., commanded a greater degree of interest and willingness to help; whereas a case of tropical fever, asthma, gastric pathology, neurosis or heart disorders and other medical causes, where the handicap was not so obvious, received a minimum of consideration. Let us remember that the latter disorders also present a placement problem to industry, ofttimes far greater than the amputation case or the individual who has a visual defect. It is our experience that the proper placement of men with these less obvious physical defects present a greater placement problem to management, because the others speak for themselves and can more readily be assigned and successfully employed.

To insure consistency and regularity of approach for employment purposes at the Caterpillar Tractor Co., the returning veteran upon presenting himself is first interviewed by a Veterans Counselor. He is received with genuine cordiality and friendliness rather than with fan-fare and confetti. These counselors are competent interviewers and thoroughly versed in the established policies and procedures of the veteran program of the company, and have besides a genuine interest in the problems in-

volved.' The veteran applicant first completes the regular employment form and, in addition, fills out another form known as "Statement of Military Experience". As the counselor's interview progresses, many interesting items are elicited which can later lend assistance in the successful placement of that individual. Questioning by the interviewer is tactful, without any force being used, and topics discussed are never made painful to the applicant. It is through this interview that we are able to secure an expression of the individual's own feelings, his interests, ambitions and ability. On the other hand, no false hopes or unreasonable expectations are implanted in him.

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From time to time, our interviewer comes in contact with an applicant who has had an unfortunate lot while in the service and has been released with what we call an "off-color discharge". This is one which may be termed neither honorably nor definitely dishonorable. Individuals with these off-color discharges are given a very careful screening by our veterans interviewer. Each such case is carefully checked for facts and the record is then presented for consideration to a special board established by the company. It is made up of the Director of Industrial Relations, Medical Director, General Factory Manager, Personnel Director, Director of Training and other officials who may have an interest in the case. In some instances the applicant under question is asked to report for a personal interview with the company Medical Director. Employment opportunities have been granted in some cases and the men have made good, though there have been others who were given a chance and failed.

Our veteran interviewer is also in a position to render counsel and advice on a great many matters that affect the life and welfare of the returning veteran. Items pertaining to insurance, pensions, filing of claims, compensation, hospitalization and outpatient treatments as well as a host of other matters are taken care of either directly or indirectly by the counselor.

I should like to mention at this point that the veteran himself is really not a problem, but he does bring problems to industry. These may affect his efficiency, production, attendance, personality and mannerisms. These problems may be intra-personal or extra-personal. They may so constitute themselves that they eventually become problems for the medical division of a company. For example, family irregularities, finances, a place to live; even his gas rationing allotment are some of the early disturbing factors.

Confidential Information

STATEMENT OF MILITARY EXPERIENCE

PERSONNEL DIVISION WILL COMPLETE THIS SPACE

First Hired
Military Leave
Entered Service
Military Discharge
Military Return
Re-employment Date
Interviewed by

NAME

MARITAL STATUS: Married ☐ Single ☐ Widowed ☐ Divorced ☐
Number of Dependents: Children?
Others? (Including Wife)

BRANCH OF SERVICE

RANK Serial Number

SERVICE:
Total length of Military Service (Years) (Months) Of this total, how many months in the United States? How many months overseas in actual combat? Non combat?

MILITARY DISCHARGE:
What type of discharge?
What was the reason for discharge?
Were you disabled?
If so, was your disability prior to service? Or service aggravated? Or service connected?
Have you applied for a pension? If so, do you receive a pension?

TRAINING AND DUTIES:
What special training did you receive while in Military Service?
In general, what were your duties while in Military Service?

BATTLES AND CAMPAIGNS:
Name the battles in which you participated.
Name the campaigns in which you participated.

MILITARY AWARDS:
Describe any Awards, Citations, or Decorations which you received.

Date Signature

Form 8788

At this point it is also necessary that the community resources manifest themselves because it is to the communities interest that these men are saved from these upsets, red-tape, delays and other inconveniences which are inimical to their adjustment to civilian status. As a matter of fact, each community should arrange for a "community plan" similar to the "Peoria Plan" where the veteran can take full advantage of the service it offers. It is through such a plan that the small plants in an area can more easily and properly place the physically impaired worker. However, it is first necessary for employers to have an organized program for the employment of these veterans.

At our company, after the veteran receives his routine interview, he is next channeled to the Medical Division. Here he is placed at ease and engaged in conversation before any attempt is made to examine him. This period gives the Medical Director an opportunity to observe his general attitude and make-up, since in our experience, certain mental and emotional disturbances, if they are present, may delay normal adjustment to peace-time employment. Frequently, they present a host of personality patterns which can be elicited during the interview with the physician. Those commonly noted are:

Feeling of being dejected
Anxiety state
State of resentment
Perplexed about the future
Afraid of being ridiculed
Negativistic attitudes
Excited without much provocation
Temperamental personality
Feeling of insecurity

On the other hand, the physician during the interview records commendable attitudes from past training,

experience or situations which have inculcated high ideals or standards in that individual and everything which appears to be in his favor.

Such an interview may take anywhere from 10 to 20 minutes and can be spoken of as a "psychiatric catharsis" through which much valuable information can be obtained to further assist the veteran's placement.

Following this interview, the veteran is ready for his physical examination, directed mainly toward finding the working capacity of that individual. The extent of the examination will vary in each case, dependent on the specific physical findings. Some cases may require x-ray and blood studies; others may necessitate consultation with specialists to determine the working capacity. In any case, the examination should be thorough and unbiased.

The matter of the veterans' disability rating which he receives for service-connected injuries or illness is given some importance in his final placement and assignment by the medical examiner. In some instances it may be very difficult to place certain individuals with high disability ratings because they are a hazard to themselves and others. It is our present experience that those veterans receiving a rating of 30 per cent or over bring to industry greater problems, both intra-personal and extra-personal.

After the physician completes an examination, he is then in a better position to indicate the type of work which the individual's physical and nervous condition will permit him to perform.

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For the purpose of total harmony, it is important that decisions affecting placement and transfers be fully explained to those members of factory supervision who will be directly involved in dealing with the veteran. Therefore, some sort of a routing form to supervision can be utilized and channeled through the personnel division or employment officer in order to see that the physician's recommendations for placement are followed. This is the procedure used at "Caterpillar". However, before this is done, each veteran should receive a medical classification rating and at "Caterpillar" those medical groups are divided as follows:

Group I—Employees in this group may be placed on any type of factory or office work.

Group II — Employees in this group, because of physical limitations or handicaps, may be placed on specified types of work only, with recommendations that they are not to be transferred unless the Medical Division is consulted.

Group III — Employees in this group, because of temporary or permanent disabilities which makes it impossible for them to meet the physical demands of the job, may not be given an immediate work assignment or they may be denied employment. The latter *does not apply* to "Caterpillar" employees who have returned from the service. This group classification will mainly affect "new hires" those who are not on active military leave from the Company.

On occasion it is important, and becomes necessary, to obtain certain medical information concerning the individual veteran. The Veterans' Administration can release, with certain limitations, various reports about that individual, if the veteran's permission to release such reports accompany the request.

Those employers without a staff physician are apt to forego a medical diagnosis of the disabled's physical capabilities through a medical examination. As a substitute, these employers sometime try to learn the extent of disability from the individual's own statement. This is not as satisfactory as a medical examination made by a physician who is acquainted with the employer's jobs. The medical examination for the employers without a full or part time staff can often be performed by making arrangements with the physician who cares for their industrial accident cases or enlisting the aid of the local practitioner. It is highly desirable that such examining physicians visit the employers premises and thoroughly acquaint themselves with the processes, operations and job demands. This will make for more successful placement.

(Continued on page 19)

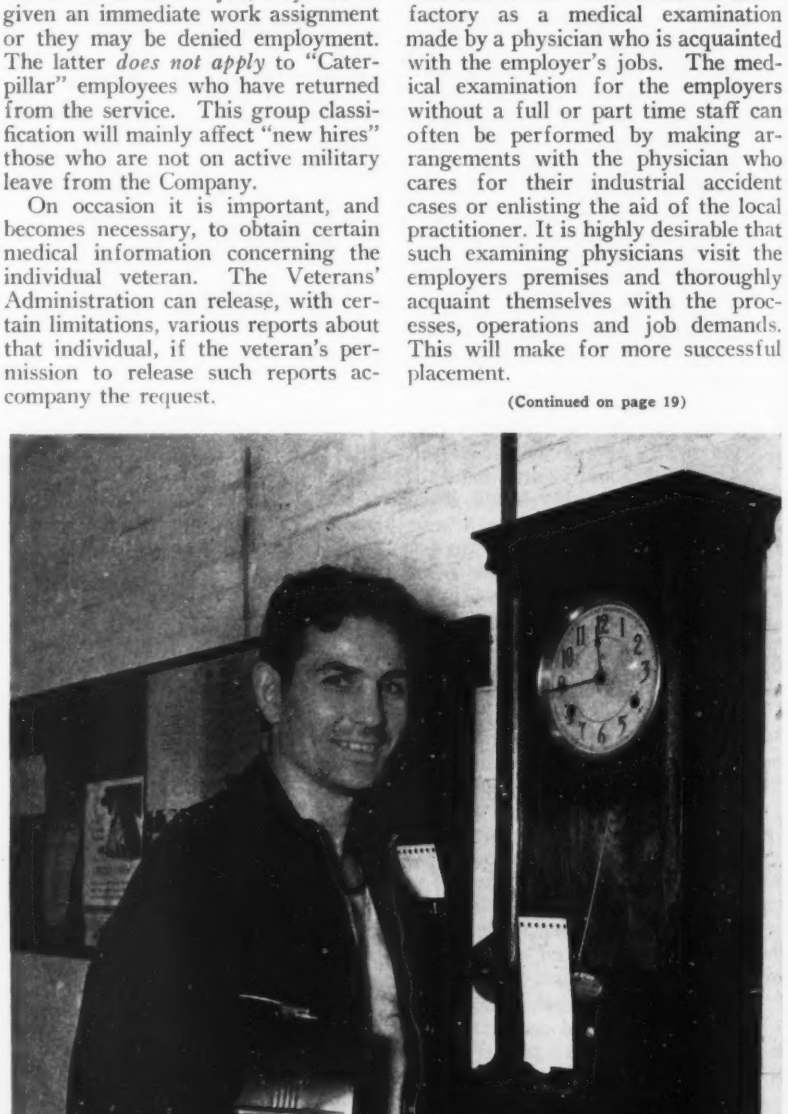


Photo by Lambert

Happy is the Veteran who returns unimpaired to the job he left to enter the armed forces

Preventing Airplane Hangar Fires

*By WILLIAM H. RODDA
SECRETARY, MUTUAL AIRCRAFT CONFERENCE, CHICAGO, ILLINOIS

THE airplane hangars at your local airport contain one of the most serious combinations of fire hazards in your entire community. Fires in airplane hangars flash beyond control so speedily that hangar and contents are usually a total loss. The job of the inspector in eliminating fire hazards and preventing the start of fire is a serious responsibility because, once a fire is under way, there is little for a fire department to do but protect exposures.

Outside the city limits of Chicago in a suburban neighborhood is a large private airfield known as the Harlem Airport. Last April 15, about 3 o'clock in the afternoon an electric lightbulb slipped from a workman's hand and shattered on the floor. Gasoline fumes ignited and fire flashed throughout the building almost instantaneously. Eight airplanes inside the hangar were totally destroyed with the building. Fire departments from six neighboring communities were able to prevent the spread of the fire to other structures, but were not able to salvage anything of the hangar where it started or the planes which were inside.

When an airport is located completely outside of municipal fire protection the story is usually worse in that all buildings at a field are likely to be destroyed in the blaze.

The amazingly bad fire record of airplane hangars is principally the result of lax operation on the part of airport operators. Other industries, such as the petroleum industry and the moving picture industry, have controlled the extreme fire hazard of gasoline and cellulose nitrate films to a point where they have phenomenally low fire losses. Airport operators could clean up their fire record, too, if they would recognize established rules for fire safety. In its June 1945 issue the magazine "Flying" ran eight pages of pictures entitled "How *Not* to Run an Airport." Shockingly bad conditions were shown and the magazine stated these conditions are the average and not the exception. An insurance executive was quoted as saying, "If we could put a stop to such operations, insurance rates would drop nearly 50%." Clearly then, the airports of our country present a challenge which fire department inspectors can take up with the knowledge that something really worthwhile can be accomplished.

WILLIAM H. RODDA

Chief among the hazards at an airport is the use and storage of large quantities of gasoline. There is no need to tell firemen the nature of gasoline, or point out the fact that the fumes lurk along the floors and low spots waiting for a spark, a carelessly dropped match, or a broken electric bulb to send flames racing throughout a building. A moderate sized hangar may house from eight to twenty small aircraft. The smallest plane intended for training at a local airport carries from 12 to 14 gallons of gasoline. A two-place craft intended for short cross-country hops will carry 18 or 20 gallons of gasoline. An Army primary trainer is likely to have from 45 to 50 gallons, and a three or four place commercial plane will have upwards of 100 gallons of gasoline. The minimum quantity of gasoline in an airplane is comparable to the amount in an automobile, and a hangar has several hundred gallons of gasoline in the fuel tanks of planes within the building.

You may ask "Why is this any more dangerous than a garage? Gasoline in garage fires has proved a serious hazard only when it has become spilled, and is not a severe hazard while in the tanks."

The gasoline in an airplane tank is much more susceptible to fire than in the automobile. In the first place, the automobile gasoline tank is built of heavy steel, whereas the airplane tank is constructed with as little weight as possible. It takes only a minor fire to get through an airplane tank and release the contents. Secondly, the airplane tank is surrounded by highly flammable wood and fabric structures in the smaller private and training planes. The steel body of an automobile does not spread fire and an automobile tank fire can usually be controlled before it spreads to other vehicles. A fire at the fuel tank of an airplane will instantly spread to doped fabric and wood frame.

Even greater than the potential hazard of several hundred gallons of gasoline in airplane tanks, is the operational hazard of loose gasoline within the hangar and workshop of an airport. You are familiar with the hazard of gasoline for washing automobile parts, and a similar lax situation exists in the aviation industry. Obviously the fire at the Harlem Airport near Chicago could not have started in the manner reported if there had not been gasoline fumes at the point where the electric light bulb

Photo by Acme

Airport fire departments must be prepared for instant action when airplanes crash and burn

*Address delivered at the Pennsylvania Fireman's Training School, Lewistown, Pennsylvania, August 8, 1945.

dropped. For ordinary cleaning of parts, kerosene is far preferable to gasoline because kerosene does not give off flammable vapors at ordinary temperatures. However, the aircraft manufacturing industry has developed degreasing equipment which uses non-flammable material. Airport managers should be encouraged to purchase standard degreasing units and to abandon the use of any flammable liquid for this purpose.

The fueling of airplanes should never be done inside a hangar. Gasoline fumes are given off in great quantity when the liquid is transferred from one tank to another. Inspectors should inquire into the fueling procedure in order to see that fueling is done outside the building.

Occasionally gasoline tanks on airplanes will be filled right to the top and an upward change in temperature will cause the gasoline liquid to expand and overflow. This is another result of careless operation on the part of the airport manager.

The metal parts of an airplane should be grounded during all fueling operations in order to prevent sparks from static electricity. It is especially important that the metal fuel tank be grounded and that it be grounded from some other point than the neck of the fueling spout. A spark at this point from static electricity will find gasoline fumes waiting to be ignited.

Another severe fire hazard of aviation risks is the use of fabric covered with cellulose nitrate dope. Almost all small planes have wing and fuselage surfaces made of dope treated fabric, and even the largest ships have the control surfaces covered with this material. The dope is a form of lacquer and is equivalent to liquid celluloid. Several coats of dope must be sprayed on to the fabric in order to make it tight and smooth. A $50,000 fire at the municipal airport in Caribou, Maine, started last year from a small electric heater left on the wing of a plane while an employee answered a telephone call. At Anchorage, Alaska, in April 1944, a $350,000 hangar fire was started by a soldering iron in contact with a freshly doped fabric part. In Glendale, California, a short circuit in a conduit box ignited airplane dope on the floor of a spray room, resulting in a loss of almost $200,000.

Flames, heating equipment of all kinds, lights and smoking must be kept away from doped aircraft parts. These highly flammable airplane wings spread fire with amazing rapidity and this fact is largely responsible for the almost complete destruction of airplane hangars once a ship is afire within the building. Flames jump from plane to plane with almost the speed of lightning and there have been several cases where employees were trapped within a building by the rapidly spreading blaze.

Photo by Acme

Falling aircraft are a constant threat to airport buildings and a crash landing without ruptured gasoline tanks is unusual

The hangars at an airport should be used for the sole purpose of storing planes. The hazards described so far are those present in any location where there are airplanes. Complete segregation of hangars from other operations is essential to safe operation. Good housekeeping is an obvious necessity to prevent the start of fires. An airplane hangar can be made a safe location if all repair and shop work is kept out of it and absolute cleanliness maintained.

A well equipped shop at an airport can completely rebuild an airplane from propeller tip to tail. The operations include engine repair, cutting and sewing of fabric, dope spraying, wood working and metal working, welding, tire repair and upholstering. A well arranged airport has all of these operations separated from the hangars, and preferably in completely separate buildings. The operations naturally separate themselves into three groups, both by efficiency of operation and according to fire hazard. Engine repair, welding, and metal working fall into a group where the fire hazard is not severe if proper precautions are taken. Wood working, cutting and sewing of fabric, and upholstering operations make a second group, and the fire hazards may be compared to those of an upholstery shop or a furniture manufacturer. There is considerable fire hazard, but any well qualified fire department inspector will be able to make recommendations for proper protection of the hazards.

Third, is the doping which is a severe hazard and should be segregated from all other operations at the airport. Small patches are frequently installed and doped by hand. Large recovering jobs are sprayed with dope, with all of the hazards of paint and lacquer spray work. Each plane requires from ten to fifteen coats of dope, and each coat is sand papered. If large wing surfaces and fuselages are being recovered it may not be possible to have this done in a regular spray booth. A desirable arrangement would be to have a large booth at one end of the spray shop so that ailerons and smaller surfaces could be sprayed within the booth. The large wings and fuselage could be sprayed in the building with the exhaust system in the booth providing ventilation for the entire building. Exhaust fans should be of the non-

(Continued on page 22)

THE VETERAN RETURNS TO INDUSTRY

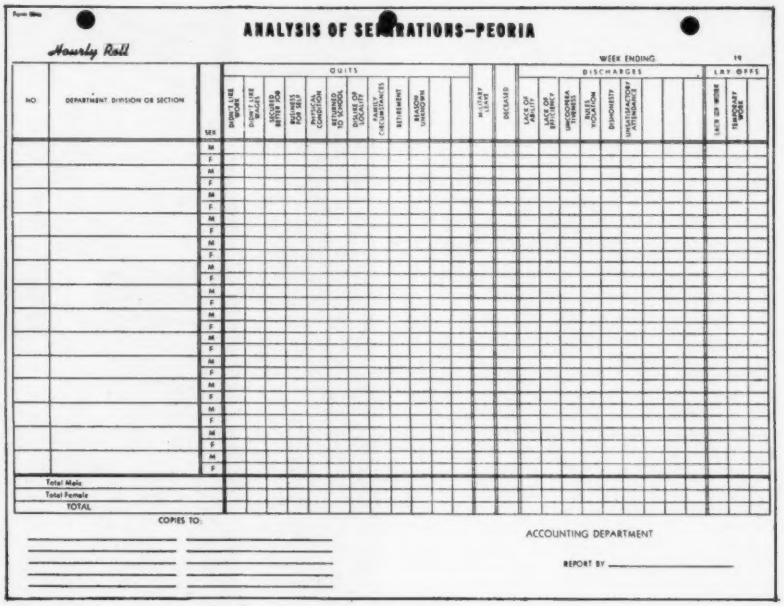
(Continued from page 16)

We should not delude ourselves into thinking that all veterans who are accepted for employment will become dependable, long range employees with good efficiency ratings. They will and do separate out for various reasons, after a short or moderately lengthy tenure of employment. This is concomitant with normal industrial trends and practices whether the individual employed be a veteran or civilian. In our experience those who have hired in as new employees after being discharged from the service statistically show a higher percentage of separations. There are numerous reasons for their leaving, such as:

Did not like the work
Did not like the wages
Secured better job
Went into business for themselves
Physical conditions not compatible with the industry
Returning to school
Dislike of locality
Family circumstances.

The follow-up of these veterans after placement is made through department supervision which submits monthly progress reports to the Personnel office. However, at any time during the period of employment, the foreman or supervisor is free to contact the Medical Division should any problems arise. Wherever there is a physical impairment, the physician should follow through on job placement to be sure that the individual can satisfactorily perform the work without injury to himself or his fellow employees. Also, where there is any degree of nervous or emotional instability even though it may in no sense preclude the possibility of employment, the physician should keep in close touch with the progress of the case to satisfy himself that readjustment is progressing satisfactorily and to lend whatever assistance he can to that end. In certain select cases it may become necessary to restrict the working hours. In others, even the shift to which a veteran is assigned, may become an important placement problem.

While we cooperate closely with our Training Division in job adjustment for the veteran, it is not suggested that vocational rehabilitation be made part of the veteran program; that, in my opinion is a function of the Veterans' Administration. On the other hand, industry can do something to promote the welfare of some of the returning veterans by making available to them training-shop courses. These are individuals in need of special induction handling.



ANALYSIS OF SEPARATIONS—PEORIA

Hourly Roll

WEEK ENDING 19

QUITS | DISCHARGES | LAY OFFS

NO. | DEPARTMENT, DIVISION OR SECTION | SEX

QUITS: DISSATISFIED WITH JOB; DISSATISFIED WITH WAGES; SECURED BETTER JOB; BUSINESS FOR SELF; PHYSICAL CONDITION; RETURNED TO SCHOOL; DISLIKE OF LOCALITY; FAMILY CIRCUMSTANCES; RETIREMENT; SEASON LAYOFF

MILITARY LEAVE | DECEASED

DISCHARGES: LACK OF WORK; LACK OF EFFICIENCY; UNSATISFACTORY ATTENDANCE; RULES VIOLATION; DISHONESTY; UNSATISFACTORY ATTENDANCE

LAY OFFS: LACK OF WORK; LACK OF WORK TEMPORARY

Total Male
Total Female
TOTAL

COPIES TO:

ACCOUNTING DEPARTMENT

REPORT BY _____

They are the ones who find it difficult to start at once on a full-time job. For this purpose, the Caterpillar Tractor Co. maintains facilities and equipment to get them "warmed-up" for the regular job to follow. The Medical Division works in close cooperation with the training group on the projects these men can undertake and the circumstances under which they can work. These vestibule schools may only be practical for large companies. It has proved profitable here because of a saving in time and material cost.

The question is often asked whether the veteran program actually works and what progress these service men are making. First, let me say that the company program, per se, should not be based on charity. All the veteran asks for is an opportunity. At our plant he is subject to all the rules and regulations of the company, receives the regular rate for the work assigned, enjoys all the welfare and insurance benefits as any other employee—as a matter of fact *the veteran does not ask for or expect any special privileges.* No new jobs are created for them. In rare cases an operation may be streamlined some to accommodate the veteran, but in the main, we simply take the job and fit the job to the man and the man to the job. The production, safety and absentee record does not reflect any abnormal trend and as a matter of fact is more commendable than the average.

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The subject under discussion no doubt presents other problems which I have not been able to cover or perhaps I do not have the answers at this moment. All I can speak for covers several hundred veterans who have applied for and received job assignments. In conclusion, I should like to say that we are going to have handicapped people, and we are going to have to take care of them. How well we do the job is going to depend upon the particular group in this room today. I hope we leave here convinced that these boys need our help and guidance. As management, we have not only an obligation to our stockholders, but we have an obligation to society; we have an obligation to these veterans who are working for us; and this is a very grave obligation. It is up to us to accept such responsibility, to help those who are less fortunate than we are, men who through no fault of their own must go through life with handicaps.

IN connection with the perusal of Dr. Kronenberg's very enlightening and instructive article, the reader may be interested in the position taken by the leading mutual insurance companies with respect to the employment of disabled veterans. This is set forth in a 24 page booklet—"A PLAN TO HELP YOU EMPLOY DISABLED VETERANS AND OTHER HANDICAPPED PERSONS"—which may be had for the asking. A post card addressed Journal of American Insurance, 919 North Michigan Avenue, Chicago 11, Illinois, asking for a copy of "Rehabilitation Booklet" will suffice.

BIG FIRES OF NINETEEN FORTY-FOUR

(Continued from page 7)

large number of sprinkler heads to operate, resulting in the depletion of the single source gravity tank water supply. Unprotected window openings allowed the fire to spread to an adjoining plant, but here it was checked by the operation of automatic sprinklers and the fire department. Two other near-by factories suffered small exposure losses. The total loss from this fire, including use and occupancy approached $600,000.

July 18, Park Ridge, Ill.
Douglas Aircraft Corp.
Loss: $1,500,000.

The two-story frame administration building, 605 ft. long and 134 ft. wide, met its inevitable end by fire as had been foreseen by fire protection authorities familiar with this plant. The main assembly building, also of frame construction, 3,000 ft. long and 800 ft. wide, was severely exposed, but was saved by the efforts of Chicago and suburban fire companies, aided by the fairly prompt collapse of the burning administration building, which reduced the exposure danger. The plant fire brigade appears to have delayed in calling public fire department assistance for a considerable time while the fire was spreading beyond control. The first chief officer from Chicago, some four miles distant, attempted immediately to sound a fourth alarm, but found all wires at the plant burned out. He was obliged to dispatch his driver to a tavern a half-mile away to telephone the multiple alarm. Rapid spread of the flames was facilitated by a plywood lined duct which extended to all parts of the structure. Considerable engineering and production records are said to have been destroyed. The monetary loss was placed at upwards of $1,500,000.

August 2, Ardmore, Okla.
Cotton Compress & Peanut Oil Mill.
Loss: $1,666,600.

Employees loading peanuts into the warehouse of the Choctaw Cotton Oil Company by means of an overhead conveyor discovered fire near the conveyor gallery. The building had previously been used for cottonseed storage and fire spread almost instantly throughout the building by means of accumulated lint on roof joists. One employee telephoned to the fire department and others fought the fire with 1½-in. and 2½-in. private hose streams, but their efforts were of little value due to low water pressure. Water pressure dropped seriously when employees of the Traders Compress Company, 50 ft. away, began wetting cotton with all available private hose lines to safeguard against embers and sparks. Openings in the sawtooth warehouse roofs were protected only by a wide mesh screen, which was readily penetrated by burning peanut hulls carried by the wind. On arrival of the fire department, a general alarm was sounded and two pumpers were connected to hydrants on a 6-in. main, which also supplied the private hose streams for both plants. This removed the pressure on the private lines so that they were of little value. Additional help was called from an Army air field 15 miles away and two fire trucks and police radio cars were used to patrol a rather extensive area endangered by sparks and embers carried by a strong wind. At least 8 fires due to flying brands were extinguished within 20 minutes. One large section of the cotton warehouse was saved by efforts of employees and firemen despite terrific heat which killed trees and shrubbery 300 ft. distant. It is reported that sheets of corrugated iron were carried as high as 400 ft. in the air by an updraft and fell as much as ten blocks from the fire. Dwellings 150 ft. away were severely scorched even while protected with 1½-in. hose streams.

The loss included destruction of over 23,000 bales of cotton amounting to $1,666,600. It is stated that had the cotton compress warehouse been provided with a secondary water supply, it might have been protected against the exposure fire from the peanut oil mill.

Photo by Acme

Stocks of inflammable goods contributed to the grand total of losses in property values

August 11, Hoboken, N. J.
Steamship Pier.
Loss: $1,710,000.

An explosion of a drum of nitrocellulose which was struck and damaged by a small motor-drawn carrier on Pier 4 caused a disastrous conflagration, which spread along the pier loaded with nitrocellulose and other cargo merchandise. The fire extended underneath the pier to a warehouse on the land end. Three men lost their lives. Outside help from New York City, Jersey City, Union City and Weehawken was called in. The pier was a total loss. All the efforts expended by the Coast Guard and others in supervising pier operations and fire fighting preparations were unable to prevent the loss of this pier primarily because it was of poor design and construction.

August 17, Granite City, Ill.
Military Property.
Loss: Several Millions.

Fire of suspicious origin started in an enclosed section of this unsprinklered frame storage shed used for reprocessing, repairing and storing tires. The shed, which was part of the U. S. Army Engineers Depot, covered an area of approximately 5 acres and was completely filled with material for shipment overseas. This consisted of automotive equipment, cans of carbide and thousands of tanks containing various gases. The men working in the building apparently tried to fight the fire themselves. The Depot has its own fire department with seven pumpers, but it was not called until 15 minutes after the fire had started. The building was a mass of flames when they arrived. Steel cylinders of compressed gases exploded and were found as far as ¾ of a mile from the burning warehouse. Considerable damage was done to an adjoining warehouse. Fire fighters were handicapped by an inadequate water supply and an insufficiency of hydrants. While this fire was still being fought by the local brigade, aided by the St. Louis Fire Department and auxiliaries, a second serious fire broke out, necessitating additional help. The loss from these two large fires had been estimated at several million dollars.

October 1, near Miami, Ariz.
Inspiration Consolidated Copper Co.
Loss: $1,000,000.

This fire was discovered by a watchman at 4:00 A.M. in a 2-equals 3-story steel frame building, partly covered with corrugated iron. This housed an electrolytic precipitation plant at the copper mine. It had combustible tanks and wood gratings between tanks. The building covered an area 460 x 102 ft. plus a generator room extending 50 ft. at one end across the entire width of the building. Fire started in one of the 20 preparation tanks, each 4 x 38 ft. in area and 3½ ft. deep. These tanks were of Douglas Fir construction protected by asphaltum base paint and lead lined. A watchman in a guard house noticed the fire and called the night operator in the tank house. These men attempted to extinguish the fire, but were unsuccessful in their efforts to use standpipe equipment due to the location of the fire and difficulty in finding the outlets. An alarm was telephoned to the plant telephone operator, who sounded the alarm

and called the Miami Fire Department, which responded with a pumper. Fire fighters were handicapped by the escape of an acid solution from the tanks, which damaged the fire hose. Flames soon involved entire tank house, including the roof. Roof construction was wood on steel. Obviously the loss was due to the excessive area subject to a single fire combustible room construction on unprotected steel and inadequate watch service in the building where the fire started.

October 4, No. Rochester, N. H.
Spaulding Fibre Co., Inc.
Loss: $641,000.

Fire started at 12:55 A.M. in a drier loaded with leatherboard for shoes on the second floor of this heavy timber mill building having wood frame exterior wall construction. The cause was believed to be an overheated bearing in the drier fan. This plant was said to be making fibre shoe soles for government use. Evidence indicates that automatic sprinklers in the drier were operating and holding the fire in check when it was discovered. The fire was discovered by a blind employee, who reported that his feet were wet by water from the sprinklers. An elderly night fireman went alone to the stair tower soon after the fire was discovered. Without carefully investigating, he closed the main sprinkler control valve, apparently assuming the fire was under control or of slight consequence. Thereafter, the fire quickly spread and involved the east end of the second floor. The night fireman meanwhile had been informed of the seriousness of the fire and sounded the mill whistle and started one of the plant fire pumps. Returning with another employee to the sprinkler valve an attempt was made to open the valve. This was subsequently found to be one-quarter open. The fire had already opened most of the sprinklers on the second floor, overtaxing the water supply. The Rochester Fire Department was called and responded in about 15 minutes time, supplying 4 hose streams from pumpers placed at the mill raceway. However, a large part of the plant was on fire when they arrived. The day fireman, who lived near by, arrived at the engine room 25 minutes after the start of the fire and found the night fireman dead near the fire pump, probably of a heart attack. Investigation indicated that a second fire pump had not been operated. All of the main building and the contents were destroyed, except the boiler house, engine room and office. The loss included $566,000 damage to building and contents and $75,000 use and occupancy loss.

October 20, Cleveland, Ohio.
East Ohio Gas Co.
Loss: $6,000,000.

Disaster struck and devastated part of Cleveland's industrial zone, taking the lives of not less than 130 people, and causing $6,000,000 damage. Two containers of liquefied natural gas exploded and threw sheets of flame over near-by residential areas. While a large proportion of the fatalities were gas company employees, quite a number of the victims were inhabitants of residences adjacent to the gas plant. A recent report indicates that half of the 2,160 individual claims presented to the East Ohio Gas Company had been settled for $1,000,000. The company was said to be making payment of $300,000 to the City of Cleveland for repairs to streets and utility mains damaged in the blast, in addition to the destruction of the gas plant and shop buildings, believed to exceed $3,000,000 damage.

October 29, Kearny, N. J.
Federal Shipbuilding & Drydock Co.
Loss: $2,125,000.

A wooden shipway was destroyed and the 75 per cent completed hull of a combat-cargo vessel severely damaged, in a fire which has been attributed to careless smoking. Two other shipways and another hull also suffered damage. The fire originated in a carpenter shop located underneath the elevated end of Way No. 5 on which a 10,000-ton hull was nearing completion. The way itself was of wooden construction, with steel scaffolding. The fire started shortly after midnight and spread through the carpenter shop, an electrical supply shed, and then was driven by a stiff wind throughout the wooden shipway itself. The heat was so great that not only did the steel exterior scaffolding collapse, but wooden scaffolding within the hull was ignited and burned violently. Fire fighters from Kearny and Jersey City, aided by the Coast Guard, protected most of Way No. 6, but were unable to prevent the spread of the flames to Way No. 4, where a similar hull was somewhat damaged. As the wooden underpinning of Way No. 5 burned out, the hull dropped with a list of ten degrees. Subsequent inspection revealed damage necessitating the dismantling of this hull. Damage to the ways is placed at about $125,000, while damage to the hulls is estimated at $2,000,000.

November 6, near Portland, Ore.
Oregon Shipbuilding Corp.
Loss: $600,000.

This fire resulted in the destruction of a two-story wooden administration building, 325 ft. by 150 ft., with a loss of $600,000. In spite of the excessive area and combustible construction, the building was unsprinklered and without fire stops, and its complete destruction by fire was inevitable. The fire was reported due to careless smoking in a women's rest room in the basement. The first alarm given by a woman employee at 5:06 A.M. was answered by one company of the private fire bridgade. At 5:20 A.M. another plant fire company was called. Not until 5:25 was help called from the near-by city of Portland. Seventeen public and four private hose streams were eventually used, but the lack of sprinklers prevented effective fire fighting. Contents of one record vault were lost due to failure to close the vault door.

November 29, Chicago, Ill.
Grain Elevator.
Loss: $1,750,000.

A series of grain dust explosions in Calumet Elevator A, operated by Rosenbaum Bros., Inc., in Chicago on the morning of May 11, 1939, resulted in a loss of nine lives and the destruction of five large elevators, with a loss of approximately $3,500,000, thereby turning in the largest individual fire loss of that year. Apparently not satisfied with the doubtful distinction of having the largest fire in 1939, Rosenbaum Bros. made a bid for similar distinction in 1944. The spectacular fire, which practically destroyed their huge elevator at 87th Street and Stewart Avenue, will turn in a loss estimated at $1,750,000, which is among the top civilian fire losses for 1944. The building, which was 100 ft. square and 140 ft. high, had a capacity of 1,450,000 bushels. As is the usual case in grain elevator fires, an initial fire was followed by a dust explosion which blew out a large section of the elevator's east wall. The grain damaged was mostly soybeans. Sixty-eight pieces of fire apparatus worked at the fire.

December 17, Newport News, Va.
Railroad Pier.
Loss: $1,000,000.

This fire destroyed Pier 8 at the Hampton Roads Port of Embarkation. This pier, owned by the Chesapeake and

(Continued on page 23)

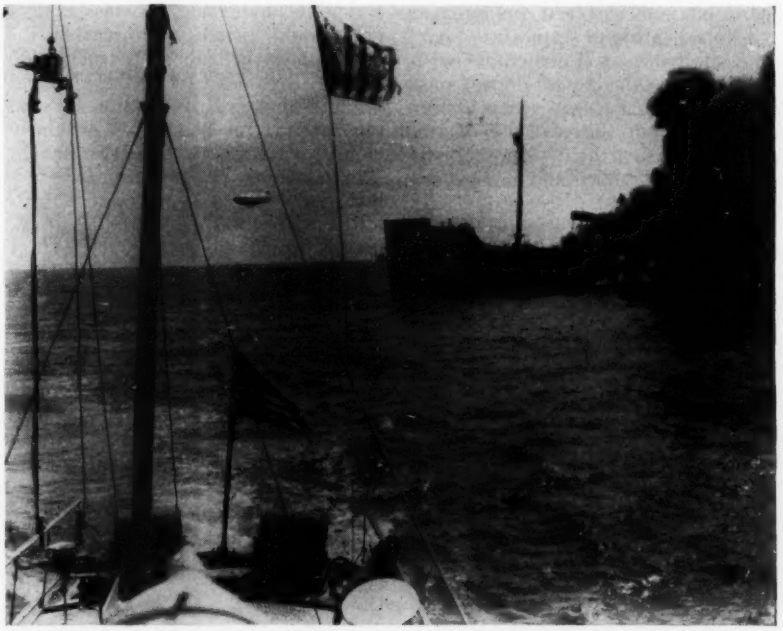

Photo by Coast Guard

War time fires consumed great quantities of much needed oil and gasoline

PREVENTING AIRPLANE HANGAR FIRES

(Continued from page 18)

sparking type with explosion-proof motors. Standard equipment is unusual for airports and you are more likely to find spraying done in the main repair shop or in an open hangar without any provision for ventilation, other than perhaps an open door here and there.

Electrical installations at the country airports are notoriously bad. Being located outside of municipalities and without any recognized electrical inspection, there is a tendency for them to string up electric wires without regard for safety. I inspected one airport where the main electrical supply came in on a couple of wires which were stretched underneath a railroad track. The wires came on a pole to one side of the track and then were laid on the ground underneath the rails and between the ties in order to reach the hangar on the other side of the track. The wires were subject to moisture and deterioration and inevitably would allow electrical leakage to the ground and an eventual short circuit. Portable electric lamps have been the source of many airplane hangar fires as a result of their being dropped or being laid on flammable fabric surfaces. If portable electric lights are used at all, they should be protected by wire guards so that the bulb itself cannot touch anything. However, there is at least one case where a fire was started by a portable electric light which did have a wire guard, but sufficient heat was radiated to a doped fabric to set it afire. Airplane mechanics will sometimes wish to hasten the drying of dope (inasmuch as many coats are necessary for a good job) and they will use electric heaters to hasten the drying. This is a dangerous practice and has caused several fires.

Open switch boxes and fuse boxes are common in these non-standard electrical installations and should be condemned. The temptation to bridge fuses with tinfoil or pennies is also present at airports and should be disapproved.

Among the operational hazards which should be eliminated is the testing of motors inside hangars. Motors should never be started in a hangar, but the airplanes must first be towed outside. There are frequent backfires from aircraft motors and they will ignite gasoline fumes which may be present within the building.

Good housekeeping is a necessity both inside and outside an airplane hangar. There is a temptation for the operator to neglect grass and brush at the edges of the field. A grass fire can easily involve buildings and airplanes parked nearby. Dry grass should be kept closely cut, and trash and oily rags disposed of completely away from the premises.

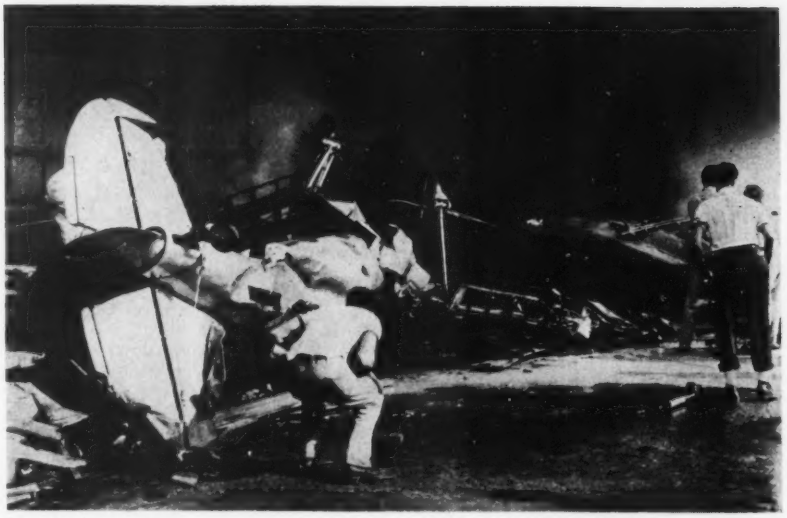

Photo by Acme

Many planes may be involved in a hangar fire because flames spread like lightning across flammable wings

The matter of fire protection at the average airport is a difficult problem. They are located away from city limits and in most cases do not have either a water supply or a municipal fire department within easy distance.

First aid fire protection should take into account the flammable liquid hazard. Extinguishers should be of a type recommended for class B fires and should include foam, carbon dioxide and the carbon tetrachloride types. Needless to say, there should be an abundance of extinguishers so that any fire can be attacked instantly and with vigor. At least two should be available at any point. Large carbon dioxide extinguishers and 40 gallon foam engines are desirable in order to provide larger supplies of extinguishing agents than would be available in the small hand sizes.

Occasionally you would find an airplane hangar where automatic sprinkler protection may be feasible. A large water supply is essential. The ordinary type of automatic sprinkler is not suitable for an airplane hangar because of the extreme height of the building. A fire at the floor of the hangar is so far below the sprinkler head that drafts will carry the heat to another part of the building. Sprinklers might open ten, twenty, or thirty feet away from the actual fire. A deluge type of sprinkler system which operates throughout the entire building or throughout a large section of the building is recommended. Obviously a heavy water supply is necessary because a considerable number of sprinkler heads would open at one time.

Even though an airport may be located at some distance from a municipality, there is always a possibility that some water supply may be secured for fire department use. Those of you who are familiar with country fire departments know what can be done with small streams and lakes. Frequently there is a brook adjoining an airport and a dam can be provided so that water is available for suction. These arrangements naturally must be made in advance and you will probably find airport managers willing to cooperate with the fire department, once the suggestion has been made. It is also desirable to have the airport manager thoroughly familiar with means to call a fire department when a fire does break out. Many airports are half way between two towns and time might be lost in deciding which department would respond to a fire at that location. The telephone number of the correct fire department should be posted along side the telephone at the airport.

At most airports there will be little in the way of ordinance or state law which can be used to enforce fire safety. Here is a job for real salesmanship on the part of the fire department inspector. The airport operator must be convinced that a fire is a costly proposition for him and he must also be persuaded that a fire can easily occur as a result of the many hazards present in aircraft operation.

BIG FIRES OF NINETEEN FORTY-FOUR

(Continued from page 21)

Ohio Railroad, was nearly 800 feet long and 200 feet wide, of wooden construction. It was supported on creosoted wooden piles. The pier deck was made of flameproofed wood, according to reports prior to the fire; this apparently had no bearing upon the spread of the fire.

This pier was one of several piers in this port area referred to as inadequately protected in the report of the N.F.P.A. Committee on Piers and Wharves submitted to the 1937 annual meeting. In 1939 a complete system of automatic sprinklers of modern design was installed to protect the pier shed superstructure, but no adequate provision was made for extinguishing fire under the pier deck. No subdividing fire walls or fire stops had been provided for this inaccessible space as specified in the N.F.P.A. Standards for Piers and Wharves (National Fire Codes for Building Construction and Equipment). No automatic sprinklers had been provided in this space nor does it appear that there were sufficient access openings through the pier deck.

The fire started at 2:30 A.M. when the gasoline tank of a small cargo-handling truck was accidentally punctured and the gasoline ignited by sparks from the truck. The burning gasoline flowed into the space under the pier through openings at the side of a depressed railroad track section. The alarm seems to have been promptly given and the public, private and government fire fighting forces went into action promptly with over 30 fire boats in action. The fire, however, was inaccessible for any manual fire fighting and the automatic sprinkler system in the superstructure had no effect upon the fire under the pier deck.

December 27, Kansas City, Mo. Warehouse and Manufacturing Building. Loss: $1,110,000.

The Owens Building, a five-story brick-joisted warehouse and manufacturing building, was completely destroyed by a fire which originated in and was confined to the basement for five hours before it spread out of control throughout the property. The building was occupied by a pharmaceutical house, a wax manufacturer, a coffee concern and several clothing manufacturers. Smoke, water and some fire damage was suffered by three other buildings nearby, The fire started during the night in a large quantity of corrugated cartons and bales of paper bags. It was finally discovered during the early morning by a passerby who heard the sprinkler alarm. On arrival, the first department attempted to enter the basement, but was driven back by heat and dense smoke. A pumping engine was connected to the sprinkler system and cellar pipes were used through the first floor, but apparently the water was not reaching the seat of the fire among the stacks of flat corrugated cartons. After five hours, one of the two pumpers connected to the sprinkler system broke down and almost immediately thereafter the first floor collapsed and the fire spread up throughout the building. The fact that the sprinkler system was substandard and obsolete, having been installed in 1896, does not altogether explain this large loss.

Aviation Underwriting Experience

An Analysis of the Combined Country-wide Experience Released by the New York Insurance Department

THE aviation insurance experience for 1944 again indicated there is not sufficient premium volume to justify any predictions concerning the adequacy of present rates. It is estimated that only about half of the 20,000 civil aircraft in the United States are insured. A series of losses in one class or even a single large loss can affect the experience adversely to a far greater extent than any other commonly written form of insurance.

The loss ratios on the Hull insurance, which is coverage on the airplanes themselves, is the most consistent. The five year loss ratios for this class varied between 44% and 56%. The 1944 figure of 21.5% as indicated on the attached table cannot be accepted as the final figure for the year. Aviation underwriting experience as reported to the New York Insurance Department is on a policy year basis. The losses on the Hull portion of the premium are not reported until late in the policy year. Previous years' experience indicate that the Hull loss ratio will rise about 10 to 12 points when the complete policy year experience is filed at the end of 1945. This would give a figure something over 30%, but it would be an improvement over the experience of the past four years.

The year 1944 indicated an improvement in the Hull experience on both the flight and the ground coverage. The improvement on the ground coverage section of the experience may be due in part to a change in underwriting procedure last year. Previously ground risks had been written without any deductible clause. It was found that numerous losses were occurring as a result of collision with other planes and stationary objects. A $50 deductible provision was added to ground coverage policies and this has served to eliminate many small and troublesome losses such as torn fabric, bent landing gears and damaged propellers.

The improvement in crash losses during 1944 is to a large extent creditable to the smaller Scheduled Airlines who carry flight insurance on their planes. They reported about $10,000 loss with premiums of almost $400,000. Crash insurance on airline risks is principally a catastrophe cover. Operation by skilled pilots prevent any considerable number of minor losses of the type which are common to private operation, and only the more serious accidents result in claims to the insurance companies. When an airliner does crash, the claim is large enough to have a serious effect on the loss ratio. It is an interesting fact that the larger Scheduled Airlines do not carry flight insurance on their planes. They have sufficiently large fleets of aircraft in operation so that they can afford to lose one to three ships a year for the cost of flight insurance on the entire fleet. The flight premiums which are received are those of the smaller airlines whose fleets of planes are not sufficiently large to justify the elimination of flight coverage. However, we may anticipate a demand for flight coverage from additional Scheduled Airlines as soon as some of the "jumbo" planes are received and put in operation. An airline which can afford to carry its own risk with a fleet of 30 or 40 planes worth $60,000 to $100,000 each, would be taking too big a chance to carry its risk on 10 or 12 additional planes worth from $500,000 to a million dollars each.

The highest loss ratios on aircraft Hull risks have consistently been those of the flying services. These flying services are the commercial operators and their losses may result from student training. Practically all student training would be allocated to the flying service classification. Both the ground and flight coverage for these operators show consistently high losses.

Passenger liability results fluctuate more widely than any other casualty classification because of the enormous liability per plane. Scheduled Airlines regularly carry $50,000 insurance per seat, and this gives a limit of more than $1,000,000 on a 21 passenger plane. Up to the present time the claims from any single crash have not approached the million dollar figure, but the total losses from Scheduled Airline crashes can run into staggering amounts. The 1944 reports indicate a loss ratio of 123% with almost a million and a half dollars set up as reserve for outstanding losses. There has been a tendency for the passenger liability loss ratio to drop as claims are closed. It is customary for liability insurance companies to set up their maximum possible loss when a claim is first pre-

sented. For example, the 1942 passenger liability loss ratio was reported as 40.6% at the end of the policy year. With most of the claims for 1942 now settled, the loss ratio has dropped to 27.7%. In a like manner the 1943 figure was repored as 82.83% at the end of the policy year, and this has now dropped to 55.93% with the closing of many claims. Accordingly it can be expected that the indicated loss ratio of 123% will drop, but not sufficiently to make the year's experience satisfactory.

The bad experience on passenger liability for 1944 resulted from losses in the Scheduled Airlines and Industrial Aid classifications. Public Liability and Property Damage results continue to be satisfactory. In view of the tremendous potential hazard, the insurance companies are fortunate that losses have been moderate. The potentialities are clearly illustrated by the crash at Seattle, Washington in 1943 in which 20 employees of a packing plant were killed by a bomber, and the recent case in which an Army bomber struck the Empire State Building in New York City. The property damage in each of these cases was said to be in the vicinity of a half milllion dollars. Liability for injury and death to members of the public and damage to property probably rests with the government for these two cases and will not be reflected in insurance loss figures.

The potential loss from Public Liability and Property Damage is mitigated by normal methods of operation. The Scheduled Airlines and most other commercial aircraft operators fly along definite routes or air lanes which avoid the tallest buildings and more congested areas. When it is necessary to fly over a heavily congested area, a Scheduled Airliner is required to fly at considerable height. Army planes, on the contrary, frequently find it necessary or desirable to deviate from the rigid routes which are followed by the commercial ships. It is not likely, for example, that a Scheduled Airliner would ever crash into a skyscraper in New York City because they follow carefully laid out routes which avoid that section of Manhattan.

Personal accident policies have produced the most consistently favorable loss ratio. This has been maintained in spite of reduced rates and broadened coverage during the past couple of years. This coverage is purchased by passengers as well as pilots and operators which gives a wide spread of liability. Individual personal accident policies produce the largest proportion of this class and the loss ratio on this class of business averages 30% for the past five years.

An examination of the aviation underwriting experience results in the obvious conclusion that underwriting is still on an uncertain basis. Many thousands of additional insurable units should help to stabilize the experience during the next five to ten years to a point where underwriting results will become more predictable.

AVIATION UNDERWRITING EXPERIENCE

SUMMARY OF ALL RISKS

Policy Year	Net Premiums Written	Incurred Losses Including Expense	Paid Losses Including Expense	Loss Reserve Dec. 31	Loss Ratio	Number of Claims
1940 Policy Year						
Hull	4,600,142	2,605,285	2,605,285	0	56.63	3,171
Public	644,196	112,341	111,866	475	17.44	484
Pass.	1,687,946	1,043,706	1,041,956	1,750	61.83	279
P/D	493,811	68,285	67,385	900	13.82	519
P. Acc.	1,113,909	362,742	362,742	0	32.56	852
Total	8,540,004	4,192,359	4,189,234	3,125	49.09	5,305
1941 Policy Year						
Hull	6,702,486	2,969,877	2,966,242	3,635	44.31	4,441
Public	672,975	85,572	52,065	33,507	12.72	326
Pass.	1,766,010	744,690	667,241	77,449	42.17	351
P/D	514,594	109,973	75,074	34,899	21.37	562
P. Acc.	1,179,367	381,182	370,898	10,284	32.32	510
Total	10,835,432	4,291,294	4,131,520	159,774	39.60	6,190
1942 Policy Year						
Hull	5,570,031	2,871,614	2,849,032	22,582	51.55	4,659
Public	884,023	316,557	155,779	160,778	35.81	370
Pass.	1,509,717	418,236	362,220	56,016	27.71	132
P/D	687,369	254,036	185,947	68,089	36.96	578
P. Acc.	2,010,675	736,348	716,704	19,644	36.62	3,383
Total	10,661,815	4,596,791	4,269,682	327,109	43.12	9,122
1943 Policy Year						
Hull	4,188,532	1,872,801	1,522,256	350,545	44.71	3,638
Public	1,020,097	146,843	36,772	110,071	14.40	365
Pass.	1,556,662	870,758	520,459	350,299	55.94	159
P/D	796,275	78,367	53,962	24,405	9.84	628
P. Acc.	1,450,125	552,058	512,126	39,932	38.07	480
Total	9,011,691	3,520,827	2,645,575	875,252	39.07	5,270
1944 Policy Year						
Hull	3,110,626	667,357	372,228	295,129	21.45	1,242
Public	529,841	82,064	12,024	70,040	15.49	234
Pass.	1,289,642	1,588,761	154,029	1,434,732	123.19	194
P/D	345,174	46,488	15,790	30,698	13.47	224
P. Acc.	835,168	312,167	184,476	127,691	37.38	60
Total	6,110,451	2,696,837	738,547	1,958,290	44.13	1,954
All Combined						
Hull	24,171,817	10,986,934	10,315,043	671,891	45.45	17,151
Public	3,751,132	743,377	368,506	374,871	19.82	1,779
Pass.	7,809,977	4,666,151	2,745,905	1,920,246	59.75	1,115
P/D	2,837,223	557,149	398,158	158,991	19.64	2,511
P. Acc.	6,589,244	2,344,497	2,146,946	197,551	35.58	5,285
Total	45,159,393	19,298,108	15,974,558	3,323,550	42.73	27,841

PERSONAL AIRPLANES—TOYS OR TRANSPORTATION

(Continued from page 10)

certainly be worked out by a nation which has produced the wonders of our present age.

Within the next five or ten years we can anticipate the airplane's becoming an important auxiliary to the automobile, an auxiliary to be used principally for long distance travel. Improvements in design will make flying almost automatic with less skill required of the pilot. Insurance on planes will be the rule rather than the exception when the requirements of finance companies take effect and when insurance costs are reduced. The problems of insurance underwriters will simplify as the types of planes become stabilized, and as the number increases to a point where rates can be based upon actual experience. The "growing pains" of Aviation insurance are a healthy indication that a great future is in the making.

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OF VAN WERT

INDIANA LUMBERMENS MUTUAL INSURANCE COMPANY
OF INDIANAPOLIS

LUMBER MUTUAL FIRE INSURANCE COMPANY
OF BOSTON

LUMBERMENS MUTUAL INSURANCE COMPANY
OF MANSFIELD

NORTHWESTERN MUTUAL FIRE ASSOCIATION
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PENNSYLVANIA LUMBERMENS MUTUAL FIRE INSURANCE CO.
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NATIONWIDE INSURANCE *Service*

Gale & Stone, Boston — Mutual Insurance Bureau, Philadelphia — Lumbermens Mutual Insurance Agency, Inc., Mansfield, Ohio, Pittsburgh, Penna—Lumbermens & Manufacturers Mutuals, Inc., James S. Kemper, Mgr., Chicago, Milwaukee, Minneapolis, Omaha — Associated Mutuals, Inc., Atlanta, Ga. — Lumber Mutual Agency, Indianapolis, Memphis, Dallas, Kansas City — Martin Agency, Seattle.

WHEN it's meal time in the nursery, there's nothing like prompt attention for improving relations—and preserving a smooth working, healthful routine.

[*The Policy Back of the Policy:* ***Our*** way of doing business that makes your interests our first consideration.]

For reasons equally clear, promptness is important in settling insurance claims. With Hardware Mutuals *policy back of the policy* on the job for you, as part of your Workmen's Compensation and Liability Insurance, you're sure of instant action—with sympathetic fair dealing that is invaluable in maintaining good employe relations. Vital too, is the safety engineering program tailored precisely to your individual needs in a way that will reduce your plant accidents to a minimum.

The *policy back of the policy* offers similar advantages in other types of insurance, too—automobile, burglary, plate glass, fire, etc. Careful selection of risks has made possible dividend returns to policyholders, amounting to over $93,000,000 since organization.

Let our representative show you how the *policy back of the policy* can provide increased service at lower cost. Our special booklet, INDUSTRIAL SAFETY PROCEDURE, with latest safety recommendations, is yours for the asking. Send for it.

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